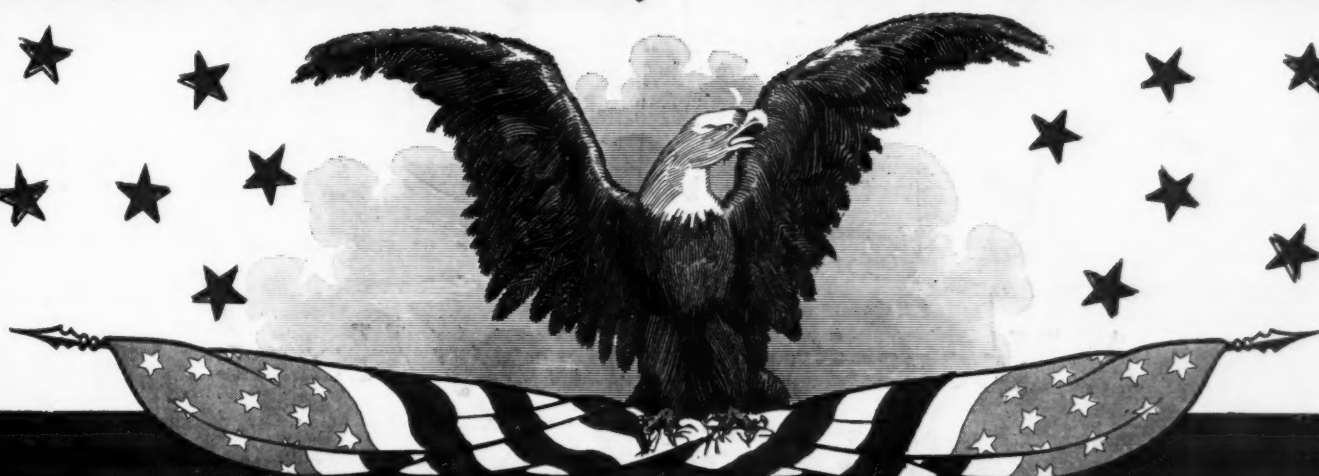


DECEMBER 1914

AMERICAN CARPENTER AND BUILDER



THE WORLD'S GREATEST BUILDING PAPER

DON'T MISS THESE---

Reaching Out After Building Business

THE story of a Contractor who landed jobs by mailing out circular Letter and illustrated Folder.

More Winter Work Letters

PRACTICAL suggestions that have tested out O. K.

Commercial Ratings for Builders

"THE Man from the Lumber Yard" offers a piece of Advice that will be worth to some Contractors \$1000.

7 Modern Designs of Bungalows and Residences

How to Figure a Fink Truss

How to Understand a Building Plan

Four Full Page Detail Plates

Questions and Answers

"Most Inter-
esting Part of
the Paper"

NEWEST IN TOOLS, EQUIPMENT, AND BUILDING MATERIALS

A study of our Advertising Pages this month is a liberal Education in Values.

"The Ad
pages save
me money."

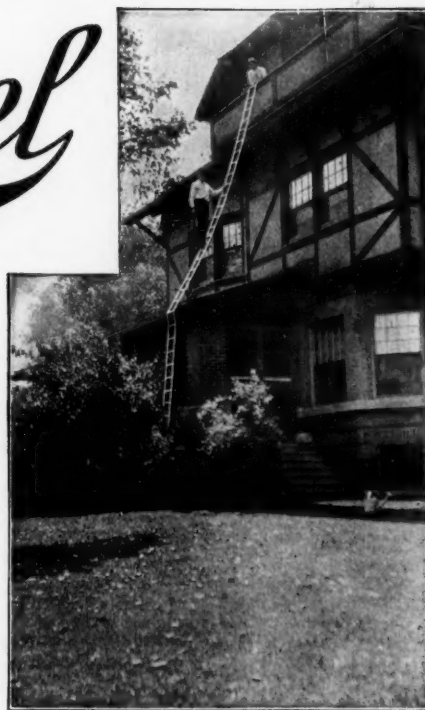
Price 10 Cents



Kingsteel
TRADE MARK
FIRE LADDER

FIRE LADDER

Is your life worth more than your life insurance? **Kingsteel** Fire Ladders are better than life insurance, for they not only protect the family, but they also protect YOU, a provider for the family.



A Necessity for Every Home

The **Kingsteel** Fire Ladder is as much a part of a modern home as good equipment is a part of a contractor's business. The **Kingsteel** Fire Ladder is out of the way when not needed, but is ever ready when necessity demands. The **Kingsteel** Fire Ladder affords no means of entrance for burglars. It is very strong and will safely carry any load that can be put upon it.

You as a builder should install it in your own home and specify or recommend it on the homes

you erect for others. They will appreciate it.

The **Kingsteel** Fire Ladder is particularly adapted for any building two or three stories in height.

It is not a rich man's proposition. Its cost is such that it can and should be part of the equipment of every building that needs protection. It actually prevents loss of life by fire. Employers of labor will appreciate it as fully as the man who desires to protect his family and himself.

Portable—Adequate—Efficient

The 1913 report of the Fire Department of Chicago shows 167 persons were rescued by firemen by means of ladders when all other means of escape were cut off. The vast majority of these were from second stories. Fire comes unexpectedly—quick escape is necessary. **Kingsteel** Fire Ladders can be dropped from any window. They provide

A SAFE WAY TO SAFETY

Responsible Contractors Wanted to Represent Us

We want a Responsible Contractor in every locality to act as our sales agent. This is a good, clean, high-class proposition that really appeals to owners of good homes, lodge halls, school houses, business blocks, etc. Its cost is much less than the usual ugly fire escape. Its efficiency is greater as its portability makes any opening a sure means of escape. Write us immediately regarding our proposition. We know that it will appeal to you as a "Wide Awake" builder.

Vaughan & Bushnell Mfg. Co.

2130 Carroll Avenue CHICAGO, U. S. A.





We're
Handing
You a Hot

"Hunch"

Let the Eveready Saw Rig

MAKE YOU BIG EXTRA PROFITS

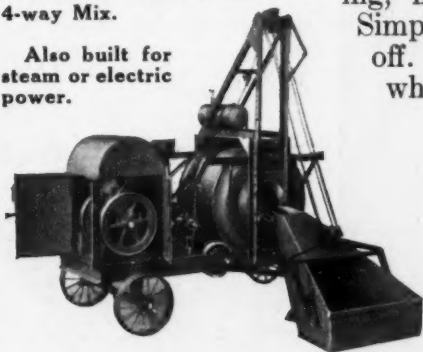
EXTRA profits! Did you get that? We mean just what we say. You make a fair profit on the job *without* an OSHKOSH EVEREADY SAW RIG, but *with* it you are *bound* to make the *extra* money that it saves in time and work. An "EVEREADY"

SAVES THE WAGES OF SIX MEN

With it two ordinary men can tire out any saw gang you ever saw. Can be easily skidded anywhere on the job. With help of the set of free attachments, the

The Mixer with the Effective
4-way Mix.

Also built for
steam or electric
power.



"EVEREADY" does ripping, cross-cutting, jig-sawing, dadoing, mitering, beveling, boring, sanding, tool grinding, etc. Simple, easy to operate. Just a whirl of the wheel and she's off. Costs about 5c an hour when at work—nothing when idle.

OSHKOSH MIXERS

Absolutely supreme in their field. Always "there" with the "goods." It will pay any Contractor to learn the OSHKOSH MIXER record of *results*. A letter or penny postal inquiry brings all the facts free. Send for them today.

Oshkosh Mfg. Co., 316 S. Main St., Oshkosh, Wis.

Chicago Office: 1440 Monadnock Bldg.



YOU LOST THAT BIG JOB BECAUSE YOUR BID WAS TOO HIGH

YOU ALSO LOST THE ADVERTISING WHICH THAT JOB
WOULD HAVE GIVEN YOU. IT HURTS, BUT NEXT TIME

REDUCE YOUR BID \$400.00 TO \$700.00

AND DEPEND UPON THIS FLOOR MACHINE TO MAKE
GOOD EVERY CENT OF IT. IT RUNS BY ELECTRICITY.

THINK THIS OVER—THEN WRITE US—NOW.

**THE AMERICAN FLOOR SURFACING MACHINE CO.
TOLEDO, OHIO**



Edge Roller easily adjusted to either side.

FREE TRIAL
15,000 in use

**RAPID, FLEXIBLE, SELF-
PROPELLING WHEN
RAISING HANDLE**

Send for our new
list and free trial
proposition.

M. L. Schlueter
225 W. Illinois St.
Chicago, Ill.

THE IDEAL

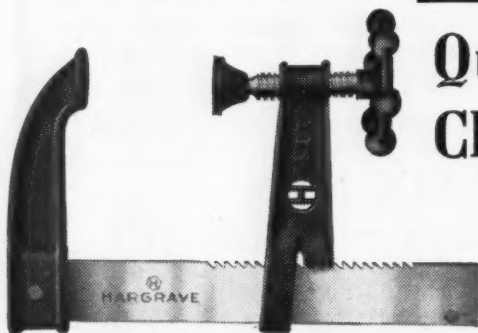
Electric Floor Sander

For surfacing all grades of wood floors, works
equally well on new or old floors. Removes
paint, varnish, dirt, grime. Will surface
5,000 square feet once over in eight hours.
The lowest priced and most efficient floor
sander on the market.

The Ideal Floor Sander is simplicity
itself and built mechanically
correct to withstand years of hard
service.

Write for our **FREE**
TRIAL proposition

**Ideal Floor
Sander Co.**
Not Inc.
105-109 N. Canal St.
CHICAGO



Quick Clamp

HARGRAVE



QUALITY

The Hargrave new Quick Clamp is for rapid work. Close notched bar of manganese steel ($1\frac{1}{2} \times \frac{1}{4}$) allows quick, rough adjustment. Once adjusted, can't slip, yet may be removed in an instant. Screw fitted with either wing or wheel, as desired. Gives great pressure. Deep jaws take in difficult work. Flat head allows use of brace or other tools close to clamp. For extra heavy work this clamp is furnished with $1\frac{3}{4} \times \frac{3}{8}$ manganese steel bar.

Like all Hargrave tools, it makes you money because it does better work in less time. Write for catalog of complete line. Please address Dept. H.

THE CINCINNATI TOOL COMPANY
Norwood, Cincinnati, Ohio

16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

Every Carpenter

knows the ordinary
lengths and cuts of raft-
ers. It's the odd ones
he cannot remember.

Our rule not only gives
the lengths and cuts of
rafters to frame the seven
ordinary pitches of roof but
it gives the length and cuts
of rafters for

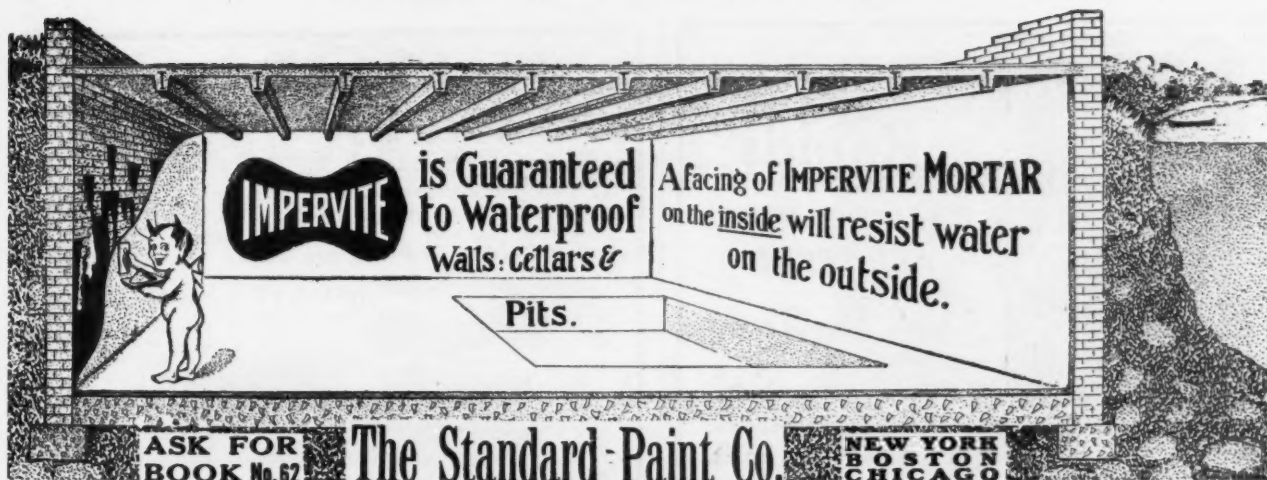
Seventeen Different Pitches of Roof

Send for our little book
explaining this rule.

IT'S FREE

We manufacture the only practical
Take-Down Square

Nicholls Mfg. Co.
OTTUMWA, IOWA



IMPERVITE is Guaranteed to Waterproof Walls, Cellars & Pits.

A facing of IMPERVITE MORTAR on the inside will resist water on the outside.

ASK FOR BOOK No. 62 **The Standard Paint Co.** NEW YORK BOSTON CHICAGO



The AUTOMATIC BALLBEARING Electric FLOOR SURFACING MACHINE

Patented Oct. 15, 1912. Made in several sizes.

will save you money by rapidly finishing your new or old floors just the way you want them. Is self-propelling—you simply guide.

Write today for Booklet telling all about the machine, our **free trial offer**, and list of users near you.

WAYVELL CHAPPELL & CO.
Dept. D. 4847E Ravenswood Ave. CHICAGO



The FOX Floor Scraper

is conceded by Carpenters and Contractors to be the most perfect and practical tool of its kind in use. It will do the work.

Sold on its merits for 10 years.

We ship on ten days approval.

FOX SUPPLY COMPANY
Dept. A. BROOKLYN, WIS.

Scraping Outfit Consists of:
1 Clamp Block for resharpening blades. 1 Wrench.
1 Burnishing Steel. 1 Hone.
1 File. 4 Crown Blades.
3 Roughing Blades.
1 Finishing & Polishing Blade & Complete set of Instructions for operating Scraper & resharpening blades.
Complete Outfit **\$25.00**

Why Pay More

than the other fellow?
Isn't your money just as good as his?

When you buy an



Adjustable Floor Finisher

you do not pay a penny more than anyone else, because I sell **DIRECT** to the user **ONLY**, with but one small profit between us, so my price to you is **LOW**.

It's the same to everyone. I'm not afraid to advertise it, nor to let you be your own judge as to the worth of my machine to **YOU**.

Shipped on ten day's **FREE TRIAL**—Scraper, six blades, burnisher, wrench, etc. **\$22.00**
Sander attachment **2.50**
Or, the complete outfit for cash with order **\$22.00**

Read this



H. P. DIDRIKSEN
Anderson, Ind.

GUARANTEE
If the Adjustable Floor Finisher fails to do your work in a manner satisfactory to **YOU** at **ANY TIME** or for **ANY REASON** through fault of the machine, you may have your money back if you want it.



\$13.95
per doz. 4 footers
—if you send cash with order.

Absolutely Safe; two of them will carry a ton, and they last a lifetime. Think of the time you save! One man alone can put them up and take them down easily and quickly.

No Side Swing if you purchase our new fixtures at 80c extra per dozen brackets: these keep the brackets absolutely rigid.

Write for Catalog of Builders' Specialties!



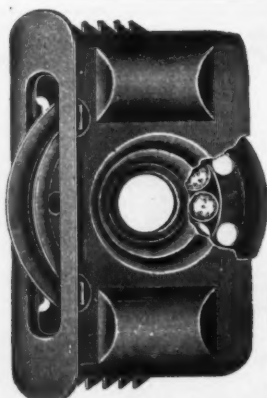
THE TAYLOR

Save minutes for your workmen and you will save money for yourself. A man's time costs just so much per hour; use clamps that will increase his output.

Moreover, **TAYLOR CLAMPS** cut down the amount actually expended for tools. In the Brooklyn Navy Yard **TAYLOR CLAMPS** have lasted more than twice as long as the next best clamps made.

Catalogue No. 11 shows 22 styles. Free on request.

James L. Taylor Mfg. Co.
Poughkeepsie, N. Y., U. S. A.



No. 19 Ball Bearing

"Grand Rapids"

**BALL BEARING
ALL STEEL**

Sash Pulleys

Fasten automatically.
No Nails. No Screws.
Just bore four holes.

The automatic saw tooth fastening feature and the simple and easily made mortise will save in labor enough to pay for the pulleys.

The Bearing contains eleven $\frac{1}{4}$ -inch Solid Steel Balls running in lubricant.

NOISELESS EVERLASTING

Write for FREE Samples

Grand Rapids Hardware Co.

MANUFACTURERS

158 Eleventh St. :: Grand Rapids, Mich.

Try These for Christmas

"YANKEE" TOOLS

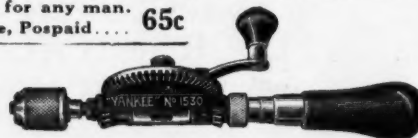
are most interesting and useful tools. They appeal to men of every profession and calling, and a more suitable gift cannot be given. They last for years, and the memory of your little act of kindness returns every time they are used.

HERE ARE A FEW



No. 60. A Pocket Screw Driver with 4 blades. Drives most any screw. Extra blades are carried in the handle. Fits the hand—fits the screws—fits the pocket—fits the purse—fit for any man.

Price, Postpaid.... **65c**

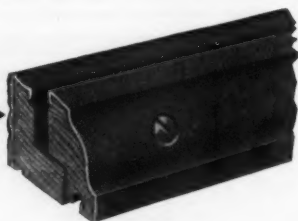


No. 1530. This drill takes any Round Shank Drill Point up to $\frac{1}{4}$ -inch diameter—has the celebrated "Yankee" Double ratched for drilling in close quarters where a full revolution of the crank cannot be secured. A splendid tool for drilling small holes in wood or metal.

Price, Postpaid..... **\$2.80**

Send for the "Yankee Tool Book", anyway.
A postal brings it.

NORTH BROS. MFG. CO., Dept. A, Philadelphia, Pa.



Get this sample—

You can't know all about a store front bar by reading about it—

Send for this sample of the No. 80 *Petz* ventilated sash.

Core is oily red cypress, over this is drawn a covering of metal—copper, brass, bronze, nickel—any finish you want.

Use the coupon now.

Detroit Show Case Co.

491 West Fort St., Detroit, Mich.

Detroit Show Case Co., Detroit, Mich.

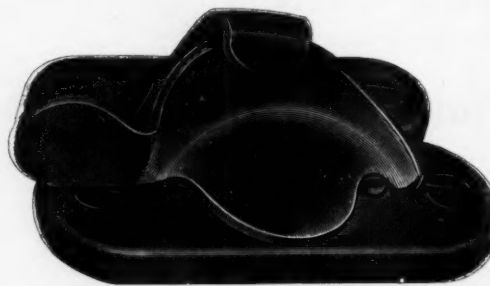
Send me a full size sample of your No. 80 sash, catalog and blue print of details.

Name.....

Address.....

.....

MONITOR SASH LOCKS



(PATENTED)

NEVER BREAK

BECAUSE THEY ARE MADE OF VERY HEAVY GAUGE METAL AND PERFECTLY CONSTRUCTED.

If the upper plate drops, the Monitor "Never Break" Sash Lock will pick it up from a lower point than any other, adjust the sashes perfectly, prevent all vibration and lock securely, so it cannot be opened from the outside.

MADE IN TWO SIZES AND ALL FURNISHED BY

The Champion Safety Lock Co.

Geneva, Ohio

NO MONEY IN ADVANCE

5 DAYS
FREE
TRIAL

John F. Weber, Pres.
Weber Mfg. Co.
670 71st Ave. West Allis, Wis.

The **WEBER** DOUBLE ACTING Floor Scraper

STERN FLOOR SCRAPER

For your own benefit let us tell you our side of the story. We're prejudiced in favor of our machine.

We know what it has done under every condition. Your opinion is unbiased.

Let us send you our circulars. Use your own judgment as to the merits of the Stern.

Write today or tomorrow—
Better today.

Whether you can afford a larger, more expensive machine is not the question. Cost and size are not indications of better work. No machine made will scrape floors better than the Stern. Quality is the first consideration. Price? The Stern is low-priced. So much the better. You save money and get a machine that will do the work as well or better.

STERN MFG. CO.
LANCASTER, PA.

Holds any
Blade Up
to 3½x7
Inch



Week's Trial FREE

I'll send you this Acme Floor Scraping Outfit free. Use it for a week at my expense. Prove to your own satisfaction that you **need** it—that it will do the work better, quicker, cheaper. Then, if you don't want it, send it back, and you are under no obligation. The

Acme Floor Scraping Outfit

is the most complete hand operated equipment on the market. Thousands in daily use, giving perfect results.

Write today for free trial.

JOS. MIOTKE 247 Lake Street Milwaukee, Wis.

\$15.00 a day CLEAR PROFIT

Go right after the floor smoothing jobs now and make the winter as profitable as summer. Price for floor finishing ranges from 1 to 3 cents per square foot. The **TRIPLE "A" SPRING DRIVEN FLOORSMOOTHER** will finish about 18 squares a day. Average net profit per day—\$15 or over. No experience necessary to do this. It's a fact. Users of the **TRIPLE "A"** everywhere are doing it.

The **TRIPLE "A"** is a hand machine. No expensive power attachments. No high prices. It does the work **AS WELL AS IT CAN BE DONE**. Leaves the floor as smooth as satin. Works rapidly and almost noiselessly on broad rubber-tired wheels.

Spring Drive Lessens Work

See that big, wide steel spring? When you push the machine forward, the spring winds; stops the machine and starts it back on the cutting stroke. Only one operation required—the push forward. The machine comes back itself. Just guide it, that's all. The Spring Drive lessens the work two-thirds. Increases the workman's capacity. Insures a firm, even cut.

There are a dozen other things about the **TRIPLE "A"** that will make a big hit with you. The machine is sold complete—adjustable weights, sander, 6 blades, 12 cutting edges, blade sharpener and a **FREE KIT OF TOOLS**.

We'll sell the **TRIPLE "A"** to you at a low price or on easy monthly payments. Send the Coupon and get full particulars.

TRIPLE "A" MACHINE CO.,

Room 331—300 W. Indiana Street,
CHICAGO, ILL.



Triple "A" with
Sandpaper Attachment

Tear
Off and
Mail.

TRIPLE "A" MACHINE CO.,
Room 331,
300 W. Indiana Street,
Chicago, Ill.

If your machine is all that you claim
for it, please send me full particulars. I
do not obligate myself in any way to buy.

Name.....

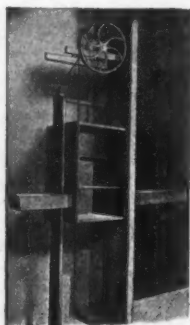
Address.....

DUMBWAITERS and ELEVATORS

CHELSEA

Exemplar of Quality

SHIPPED OR ERECTED ANYWHERE



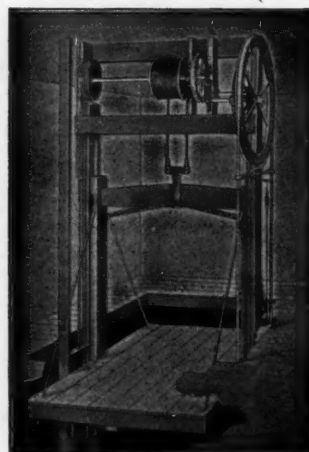
No. 5 Auto Brake
Dumbwaiter, 75 to 200
lbs. capacity.

Our Catalog "C"
Mailed on Request

We manufacture only one quality and that is the best that can be made. So we guarantee each Dumbwaiter we make.

CHELSEA ELEVATOR CO.
334 W. 36th St. NEW YORK CITY

This Elevator — IS — PAR--EXCELLENT



in all that name implies.

So also are our *Dumbwaiters, Side-walk Lifts, Carriage, Auto and Store Elevators.*

Mr. Contractor, you should install our line exclusively. It will mean satisfaction for your client, and lasting good reputation and profit for you. No worry. No bother. No trouble.

Easily installed from our complete plans and instructions which are sent with each elevator.

The Reasonable Cost Will Interest You

Write to us today stating requirements, giving style of machine wanted, size of platform and number of feet travel and we will name you a money-saving price on equipment made to serve you well.

SIDNEY ELEVATOR MFG. WORKS, Sidney, Ohio

WARNER ELEVATORS and DUMB-WAITERS

We give you more good material—good workmanship—good Elevator and good service than any elevator builder on earth—for your money.

Send for Catalogue

The Warner Elevator Mfg. Co. : Cincinnati

The Demand For GOOD DUMBWAITERS Is Increasing!

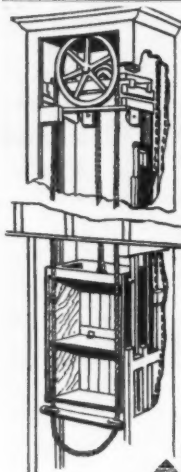
Each job presents special requirements. Some one type of Dumbwaiter will give better results than any other.

The Sedgwick Machine Works have compiled a new catalogue giving full details of many different types. It is sent on request and you should have a copy.

All catalogue sizes and types are carried in stock. Telegraphic orders filled same day they are received.

Blue prints and complete directions for erecting sent with each outfit.

SEDGWICK MACHINE WORKS
132 Liberty Street NEW YORK



A. B. C. DUMBWAITERS

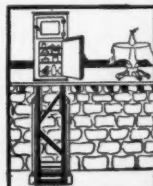
Called This For Their Simplicity And Perfection

They can be relied on to give permanent satisfaction. The design is right, the workmanship and materials of the best. Our broad experience and reputation stands back of all our Dumbwaiters. Why not handle King Dumbwaiters. They will net you a good profit and make all your customers boosters.

The King "Safety Check"

Is part of the equipment of all our Dumbwaiters. It will hold load at any floor. Our catalog describes it. Send us your specifications and let us figure them. Send for catalog now.

WM. F. KING
20 Kingsland Ave. Brooklyn, N. Y.

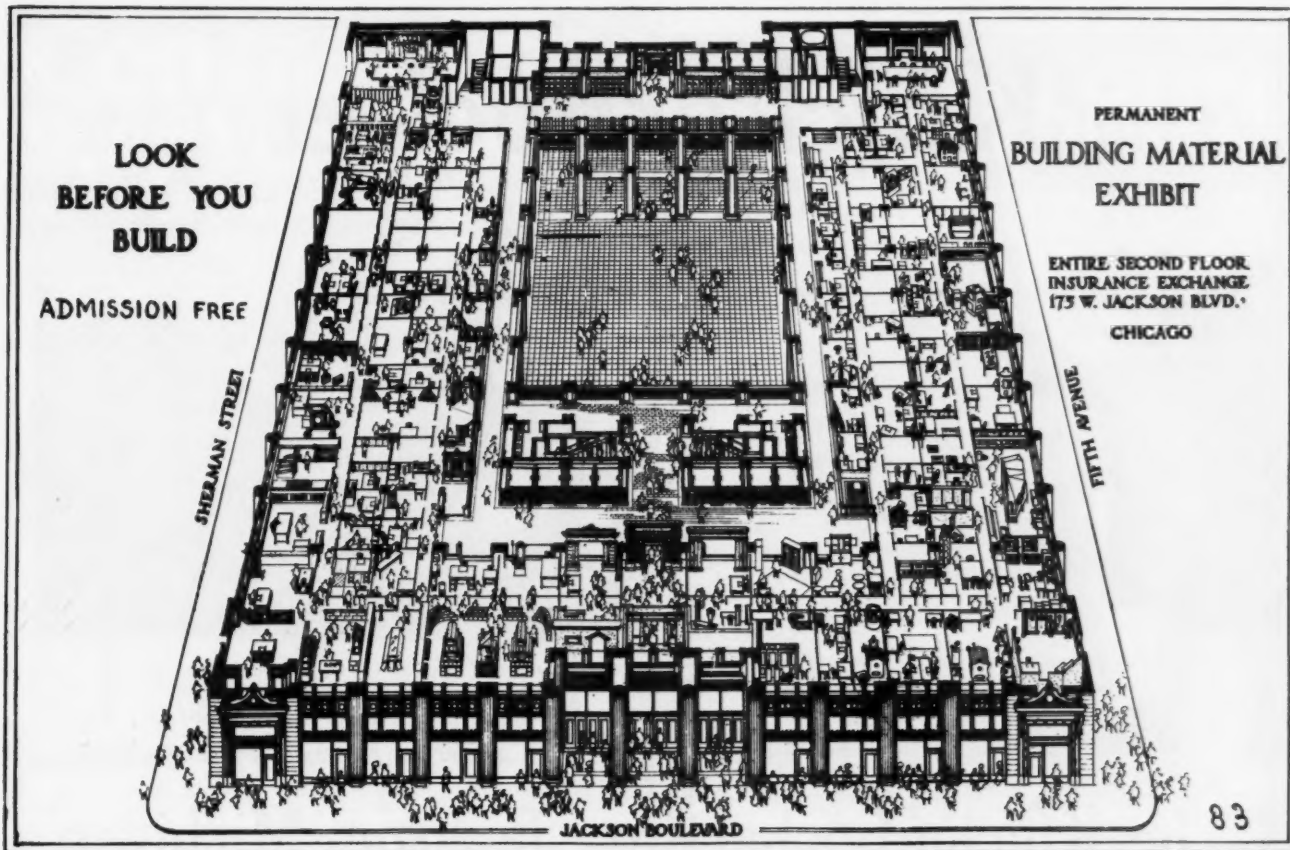


CARPENTERS AND BUILDERS
make extra money by installing this practical necessity in new and old homes. It saves 3650 trips to the cellar each year. "WIFE'S JOY" DUMBWAITER—Ball Bearing—Disappearing. Operates quickly by a press of the button. Takes up no room. Top lies flush with floor; can be walked on. Practical for any home. Keeps food perfectly. Can be installed complete in 2 hours. WRITE FOR CIRCULARS. Fifteen Days' Free Trial Without Any Deposit.

AMERICAN ELEVATOR CO. - - - - - Bloomsburg, Pa.



THE COLUMBIA
DUMB WAITERS ELEVATORS
CELLAR HOISTS
JUMPER DISAPPEARING DUMB WAITERS
CHAIN HOISTS, CRANES AND TROLLEYS
SEND FOR CATALOGUE.
J. G. SPIEDEL, Reading, Pa.



GREATEST Building Material Exhibit in the World

Covers 25,000 square feet of floor area

If you are in the market for any Building Material, Machinery or supplies, fill out and mail the coupon below and we will at once place you in communication with leading manufacturers and make no charge for our services.

Building Material Exhibit, (Inc.)

Entire 2nd Floor - 175 West Jackson Boulevard - CHICAGO, ILL.

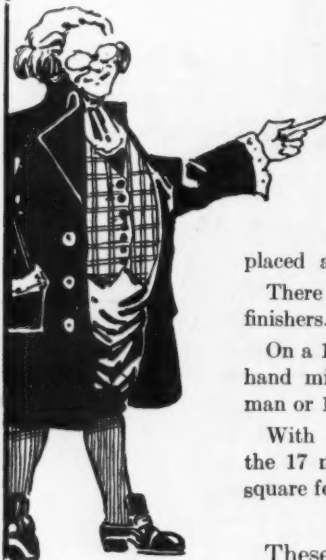
City _____ Date _____ 191 _____

Gentlemen:--Kindly procure for me free of charge catalogues and prices on the following:

Name _____

Business _____ Address _____

The Knickerbocker Line



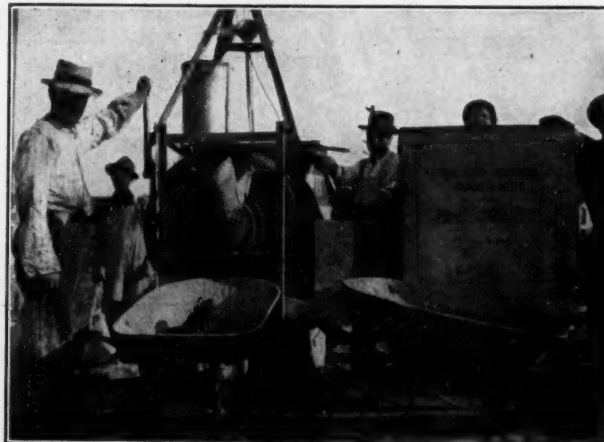
This Crew

is mixing concrete for sidewalk base 5 inches thick using a No. 5 "**Knickerbocker**" Batch Mixer with loader.

Another crew and a No. 5 "**Knickerbocker**" with a stationary batch hopper placed and finished the 1-inch top. There were 17 men all told including finishers.

On a 10-hour day their best output hand mixing was 90 square feet per man or 1,530 for 17 men.

With the two "**Knickerbockers**" the 17 men placed and finished 2,600 square feet walk in 10-hour day.



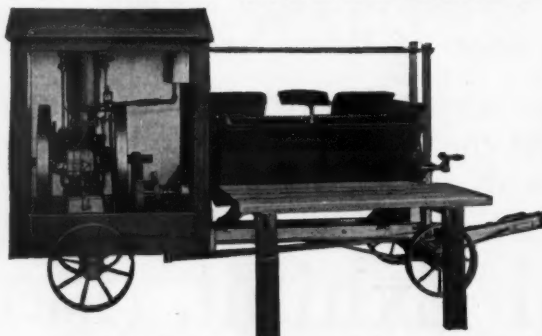
La Cato Construction Co., Audubon, N. J.

These Contractors **Reduced** their Labor Cost **60%** by using "**Knickerbockers**"

The Knickerbocker Co., Jackson, Michigan

Write for Catalog

Blystone Batch Mixer For Plaster - Concrete - Mortar



A saving of \$25.00 per day was made in mixing hardwall plaster for the big Machinery Palace for the Panama Pacific Exposition.

The Cement Tile & Block Mfg. Co., of Osgood, Ohio, paid for their Blystone in three months work in their block plant.

One man slaked lime and made mortar for ten masons and had time to spare for other work on a job recently done by G. Ed Berry, of Harrisburg, Ills. Mr. Berry also says he got 10% more mortar per barrel of lime.

H. A. Farmer, St. Petersburg, Fla., recently wrote us as follows: "I am so well pleased with mixer, I want another just like it. Ship me another one as soon as possible."

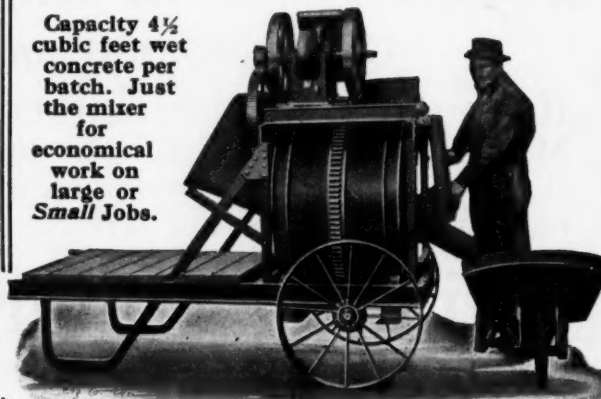
Write for catalog today.

BLYSTONE MANUFACTURING COMPANY

286 Carpenter St.,
CAMBRIDGE SPRINGS, PA.

ARCHER CONCRETE MIXER

Capacity $4\frac{1}{2}$ cubic feet wet concrete per batch. Just the mixer for economical work on large or small jobs.



Saves the Work of 5 Men

The Archer Mixer by fast mixing and by discharging the concrete directly into the forms saves the work of five men. No wheeling is necessary. Loading platform is low. Barrow dumps into the charging hopper which is strongly braced so it will not bend or "give" under weight.

The price of the Archer makes it an attractive investment for the Carpenter and Contractor. It is built of first quality iron and steel with blue annealed steel plate drum. $3\frac{1}{2}$ H. P. Gasoline Engine. Platform 5 feet long by 38 inches wide and 21 inches high. Can be used anywhere on the job—in the basement or on the roof. We agree to refund your money if the Archer does not do all we claim. Write for full description and price.

Archer Iron Works
2439 West 34th Place

CHICAGO,
ILLINOIS

Contractors Stop! Look! Listen!

**THE GREATEST MIXER SENSATION
IS DUE TO ARRIVE JAN. 1st**



*It's a mixer we are proud of
its Father is Mr. High Quality
its Mother is Mrs. Popular*

A speedy, thorough mixing machine,
that does not stop—discharges fast—
and has quality features and labor
saving attachments not found in any
other mixer—irrespective of price.
This is no usual Proud Father talk
—wait and see.

**"LIGHT WEIGHT"
BOSS
STEEL KING**

IT MORE THAN LIVES UP TO ITS NAME

Last year its low price flooded our
big factory with orders.

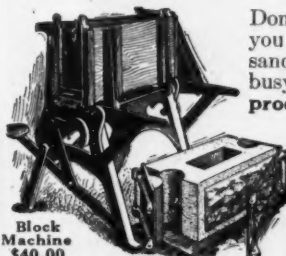
NOW LISTEN—This year, this mixer will have
Hyatt Roller Bearings (like a 5 ton auto truck).
Oil once a week—new fast re-mix mixing action—
NOVO engines, with 20% excess power—Hinged
low loading platform—and the price—wait and see.

WAIT. Full page advertisements will
appear in leading papers in

January—Our literature and low price proposition ready Jan-
uary 1st, or sooner—Don't buy a mixer without seeing the
BOSS—Write today—We will send complete facts as soon as
the printers get literature out.

American Cement Machine Co., Inc.
1006 Johnson Street - - - KEOKUK, IOWA

Don't "Give In" to Winter!



Block
Machine
\$40.00

We sell equipment for making
Concrete Block and Brick.
Concrete Porches, Concrete
Columns, Flower Boxes,
Concrete Vases, Sewer
Pipe, and other products
used in connection with your
regular business. What you
don't sell now you surely
will when the busy season
opens up.

All Dunn
Machines
and Molds
are sold on
15 days'
trial.

Patent
No 842262 and
752700



Dunn No. 1
Concrete Mixer

Prices from \$67.50 to \$224. On skids and trucks. Do more and cost
less than any other on the market. Ask for mixer catalog.

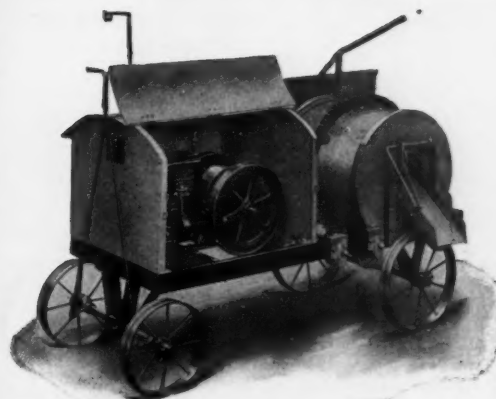


W. E. DUNN MFG. CO.

4132 Fillmore St., CHICAGO



THE *Atlas* MIXER



CAPACITY—5-ft. batch, easily fifty cubic
yards per day.

"Notice"

Our success with the
Atlas Mixer, and the large
sales made the past year have
enabled us to reduce factory
and selling costs.

We are going to share
this extra profit with our
customers.

You cannot afford to
buy any Mixer until you have
asked us the price of this
machine for 1915.

**Atlas Engineering
Company**

783 Thirtieth Street
MILWAUKEE, WIS.

Supplies the Demand for a Small Perfect Mixer



McCracken Batch
Mixer

The McCracken Portable Batch Mixer

is designed and built to meet the demand for a strong, simple, durable and practical mixer, that is large enough for all ordinary contract work, yet light enough to be profitable on the small job as well as on the large. Mounted on good steel trucks, EXTRA LARGE DRUM OF THE PROPER SHAPE, equipped with our own high-grade 2-HP. SIOUX engine, enclosed in a good steel housing (not a cheap box), also has friction clutch, so that drum can be started and stopped without stopping the engine. Capacity, thirty to forty yards per day. Cost for power, twenty-five cents per day. The largest, best and most complete mixer on the market for the money.

Write for Further Particulars

SIOUX CITY ENGINE & MACHINERY COMPANY 9th and Division Sts.
SIOUX CITY, IOWA

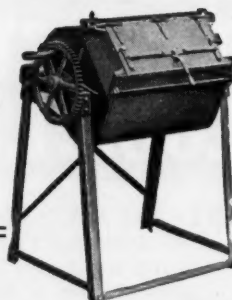
Capacity
3 to 5 Cubic Feet
Per Batch

Weight, 800 Lbs.

On Trucks,
1000 Lbs.

On
Trucks
with
Engine,
1400 Lbs.

PRICE



\$23.00

BUILDERS Hand Batch Mixer

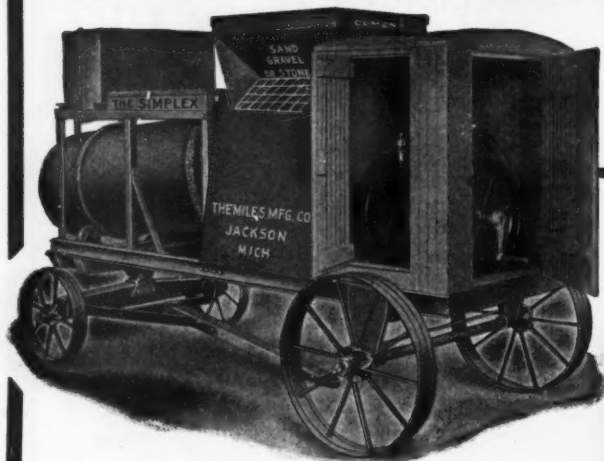
especially designed for Carpenters, Masons, Builders and Farmers. Here is a mixer built to handle all kinds of little concrete jobs that come up in all buildings. It will turn out a 3 ft. batch of loose material in from 1½ to 2 minutes. It is so constructed that a wheelbarrow can be run under the drum and the concrete discharged into it. This machine weighs 220 lbs. and can easily be carried about in a wheelbarrow. It is well made being constructed of steel and cast iron. The price is only \$23.00. Can you afford to mix concrete by the old slow way with this fast handy mixer selling at this price.

After you have received the mixer and it fails to satisfy you we will cheerfully refund your money.

We also manufacture Power Mixers of all capacities, all kinds of Block Machines, Silo Block Machines, Brick Machines, Pipe and Tile Molds, Burial Vault Molds, Ornamental Moulds, etc. Our large Complete Catalog describes all. Send us your name, we'll send you a Copy. Don't fail to visit us at the Chicago Cement Show, Booth No. 126.

Northwestern Steel & Iron Works
626 Ball Street EAU CLAIRE, WIS.

Buy The SIMPLEX 1914 Model MIXER



Combining the good features of both batch and continuous mixers in the one machine.

The best feature of the Batch Mixers is the rolling of the materials. The greatest advantage of the Continuous Mixer is the automatic measuring and feeding of the materials.

Only one machine combines these two features—the SIMPLEX. It's the happy medium between the two types of mixers, giving the points of advantage claimed by each, and eliminating the faults of both.

Write for New Complete Catalog.

Reliable Agents Wanted.

The Miles Mfg. Co.
309 E. Franklin St. JACKSON, MICH.

THE WINNER MIXER



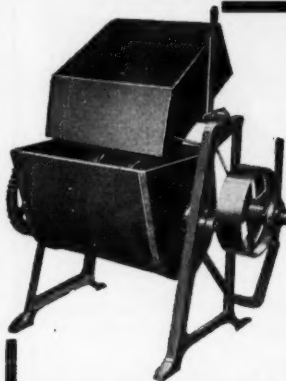
Will make money for you even if you don't have work enough to keep it running all the time. The cost is very small, and one gallon gasoline will run it a day.

Mixes 4 and 5 cubic feet per batch
Daily capacity, 30 to 40 cubic yards

Ask for our FREE Catalog

THE CEMENT TILE MACHINERY CO.
133 Rath Street Waterloo, Iowa

Think of It!

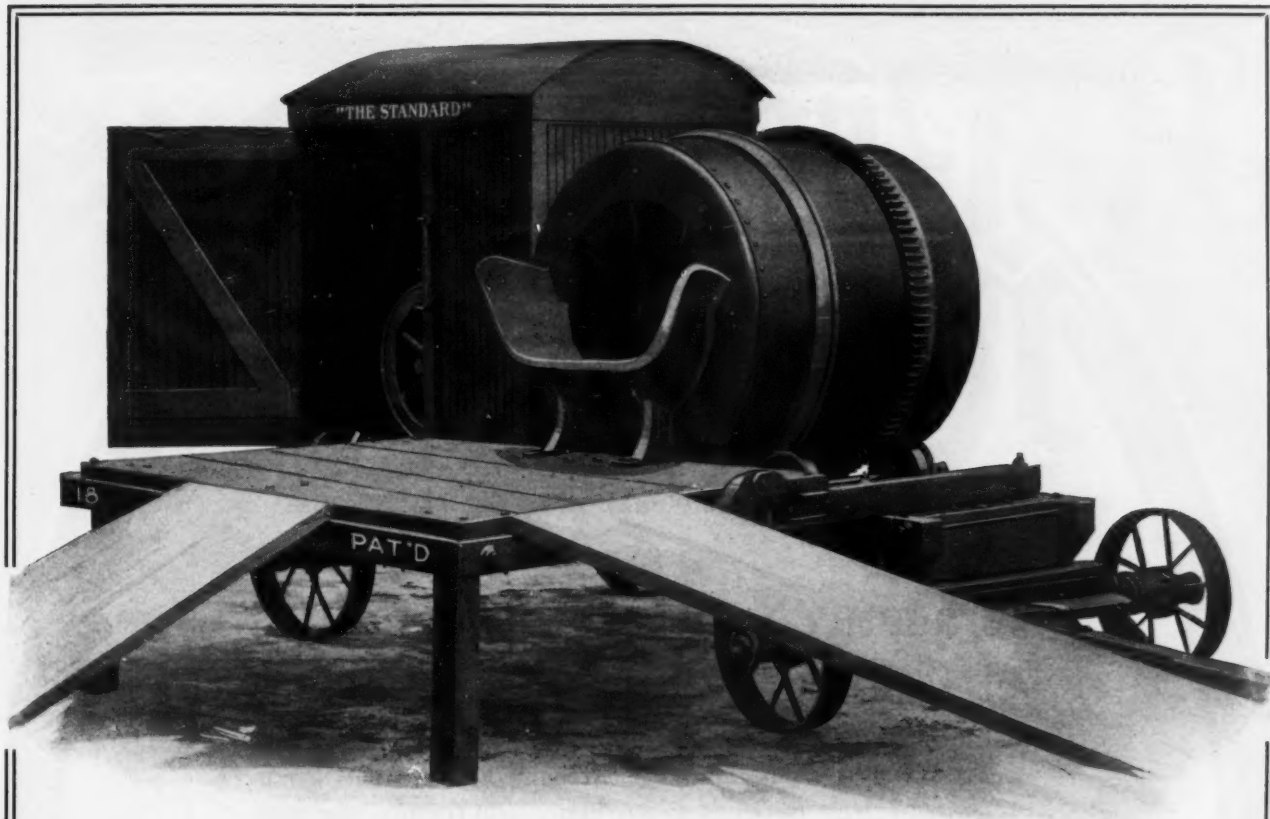


This **HELPER** mixer that will mix mortar and concrete, only **\$35.00**

It will mix two cubic feet at a time. The measuring box enables you to get another batch ready while one batch is being mixed. Requires 1½ h.p. engine to run it. Daily capacity 15 to 20 cubic yards.

Send us your order now, or ask for FREE catalog giving more information.

THE CEMENT TILE MACHINERY CO., 132 Rath St., Waterloo, Iowa



Speed Up Your Production

The Standard Low Charging

With "The STANDARD" Low-Charging Concrete Mixers you are able to speed up your production by time saved in the use of no loading skips. "The STANDARD" Mixers are built low to the ground, and by the special designed drum the charging is done at its base.

While the wheelers are conveying the loads to the skip, in about the same time they can dump them directly into the charging chute and the time consumed by the extra operation of loading devices is eliminated.

Contractors who are specialists on foundation work on dams, piers, walks, etc., should investigate the simplicity of these mixers, their lightness and compactness, which means much less difficulty in installing them on the job.

The assurance of their being in constant operating condition is guaranteed by the absolute elimination of sheaves and ropes and by the rugged mechanical construction both in design and by the quality of the materials used.

Write for Special Catalog No. 44-12

The Standard Scale and Supply Co.

New York
136 W. Broadway
Philadelphia
35 So. Fourth St.

PITTSBURGH
243-245 Water Street

Chicago
1345-47 Wabash Ave.
Cleveland
1547 Columbus Rd.

1915

A Prosperous New Year

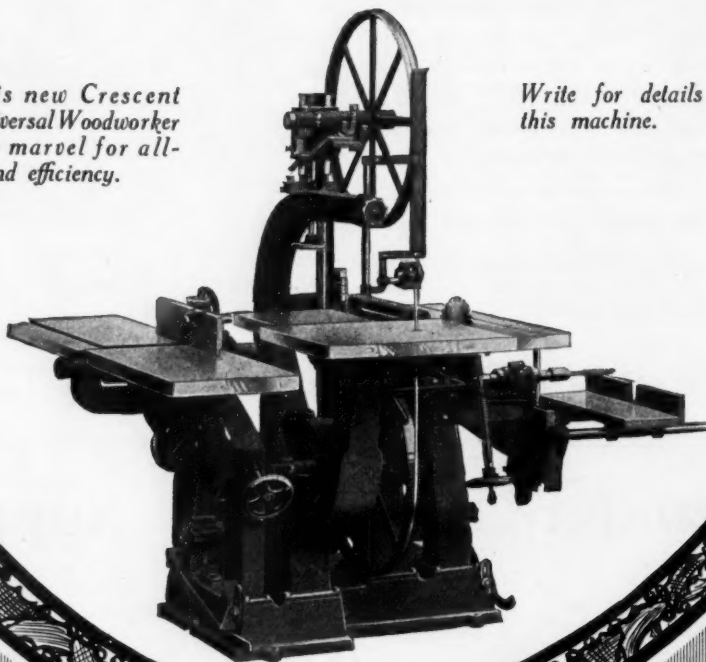
is assured to the large family
of Crescent Machine owners.

Their Power Woodworkers will earn them many an extra dollar and their reputation as progressive builders will grow. We also extend greetings to our many new friends who have joined the Crescent Family during the past year. Pledging ourselves to a continuance of the policy which has merited your confidence, we wish you a Happy and Prosperous New Year.

The Crescent Machine Company
Leetonia, Ohio

*This new Crescent
Universal Woodworker
is a marvel for all-
round efficiency.*

*Write for details of
this machine.*



1915

THE Crescent Line of Woodworking Machines

is at the head of the field of Power Woodworking Equipment. Their Design, their Construction, their Efficiency and their moderate cost has won them the reputation of being the best from the simple Saw-table to the Large Universal Woodworker. We are Specialists in Woodworking Machinery and the large number of Crescent Machines in use all over the Country is a strong Recommendation for their use.

Crescent Quality

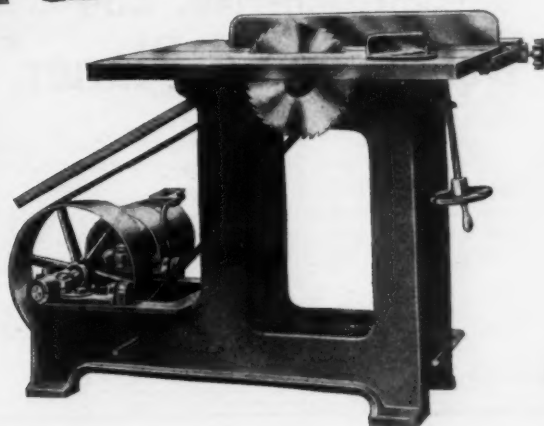
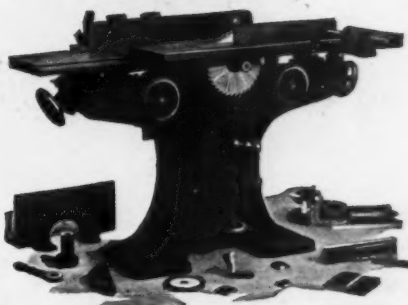
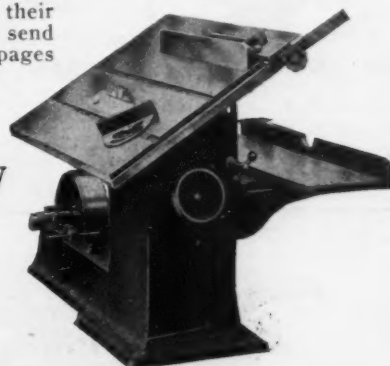
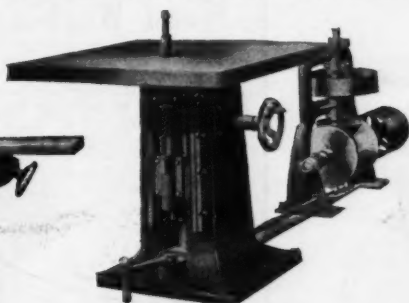
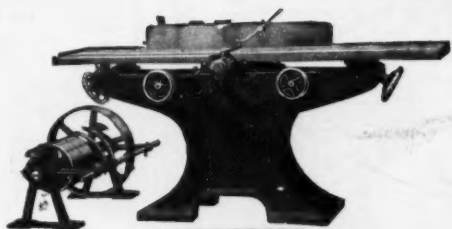
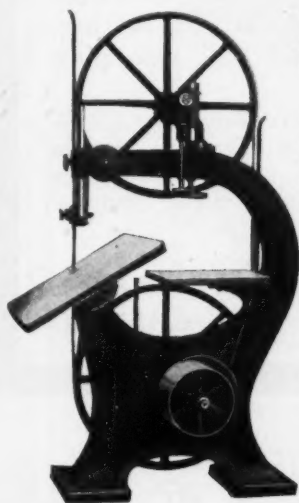
"Quality First" is the aim of the Entire Crescent Organization. In offering you these Woodworkers you are getting the best materials, skilled workmanship and good value.

Our Line Includes

six models of Band Saws, five models of Saw Tables, two Shapers, six Jointers, four models of Planers, two Surfacers, Disk, Grinders, Post Borer, Universal Borer and our popular Crescent Line of Universal Woodworkers. These machines can be furnished for either gasoline or individual motor drive.

In order to better acquaint you with these machines and show their individual Construction, their special features and specifications, we want to send you our neat little Catalogue. It contains 144 pages and will surely interest you. We'll send this free if you send us your name and address.

THE
Crescent Machine Company
224 Main St., Leetonia, Ohio



Let Chicago Machinery Exchange Start You in Business



CHICAGO No. 10 VARIETY SAW

We have the largest line of
high grade

Wood Working Machines

in the United States, and we are in shape to supply an equipment that will meet any requirement or pocketbook. We can figure on the entire outfit, including the machinery, line shafting, belting, motors or gasoline engines, and will also plan your shop.

We also have a separate department carrying a large stock of second-hand machines that are offered at bargain prices. Very often you can select a mixed outfit of new and good second-hand tools and get an excellent combination for comparatively little money.

Chicago Machinery Exchange

1215-1223 Washington Blvd.

:::

CHICAGO



Carpenters and Builders are using the

FAY-EGAN No. 254 "LIGHTNING" Bench Hand Planer

to advantage

They use it to plane, joint, rabbet, etc. It is handy, quickly adjustable, takes up small space, consumes little power and operating cost is low.

Circular safety cylinder with thin, air-hardened steel knives, runs true and produces perfectly smooth work.

Any carpenter can afford a No. 254—it pays for itself quickly.

Write for Bulletin H-7

J. A. FAY & EGAN CO.

545-565 W. Front Street,

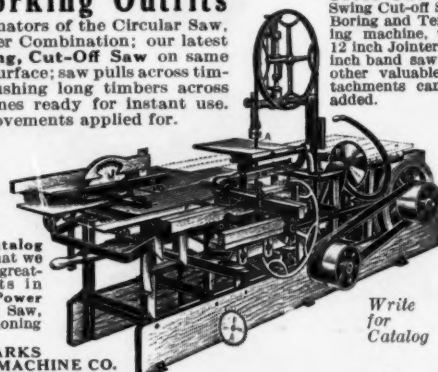
CINCINNATI, OHIO

Parks Portable Single and Combination Wood Working Outfits

We are the originators of the Circular Saw, Band Saw, Jointer Combination; our latest innovation, **Swing, Cut-Off Saw** on same base; long table surface; saw pulls across timber instead of pushing long timbers across saw. All machines ready for instant use. Patents on improvements applied for.

Machines are made in large quantities which enables us to sell at lowest prices and make immediate shipment. Ask for catalog and you will find that we have also let in the greatest improvements in Foot and Hand Power Circular Saw, Band Saw, Mortising and Tenoning Machines.

THE PARKS
BALL BEARING MACHINE CO.
Fugus St. & C. H. & D. Ry.
Cincinnati, Ohio, U. S. A.



Circular Rip and
Cross-Cut Saw,
Swing Cut-off Saw,
Boring and Tenon-
ing machine, with
12 inch Jointer; 22
inch band saw and
other valuable at-
tachments can be
added.

Write
for
Catalog

CARPENTERS

In these days of close competition need the best
possible equipment, and this they can have in

Barnes' Hand and Foot Power Machinery

Our new foot and hand power Circular
Saw No. 4, the strongest, most powerful
and in every way the best machine of its
kind ever made. For ripping, cross cut-
ting, boring and grooving.

SEND FOR OUR
NEW CATALOGUE

W.F. & John Barnes Co.
74 RUBY ST. ROCKFORD, ILL.





5 COMPLETE MACHINES, Independent in 1 operation—economically combined in 1

UNIVERSAL WOODWORKER

with nearly a score of extra attachments—
including

PRACTICAL POWER-FEED PONY PLANER

The Famous Universal offers a number of advantages and features not found in other woodworkers. The removable head on the jointer is an important one, as it allows the use of special sticker heads and sand drums, etc., and the power feed planing attachment is undoubtedly the most important as it enables the operator to convert his hand jointer into a practical pony planer. The variety of attachments of this machine make it possible to furnish a combination that comprises just what is needed.

1

Do you note the strong construction of the band saw? This frame is one mighty casting—firmly secured to the main frame. See that heavy column directly under the center? It rests squarely on the floor. The design is exceedingly compact—but also very strong. Table tilts to 45 degrees. Lock it where you want it.

2

JOINTER

This Jointer has **removable head**. A standard "Famous" attachment which can be provided in either 12" or 16" size. Remember, this device is ready to use—even when the other four parts are busily engaged. Be sure that you get a jointer with a removable head—this is an important feature.

3

SAW TABLE

The 28x40 saw table will take rip or cut-off saws up to 16" in diameter. Dado heads and different groover heads may be used. This will serve the purpose of any regular variety saw. Driven by clutch pulley below. Controlled by convenient lever. A thoroughly reliable attachment.

4

SHAPER

The Single Spindle Reversible shaper is ready for immediate use. No waiting to change. Independent in operation. The iron table—being between the two—is in direct line with Saw and Jointer Tables—an extensive surface for large work! Adjusted and operated quickly and conveniently.

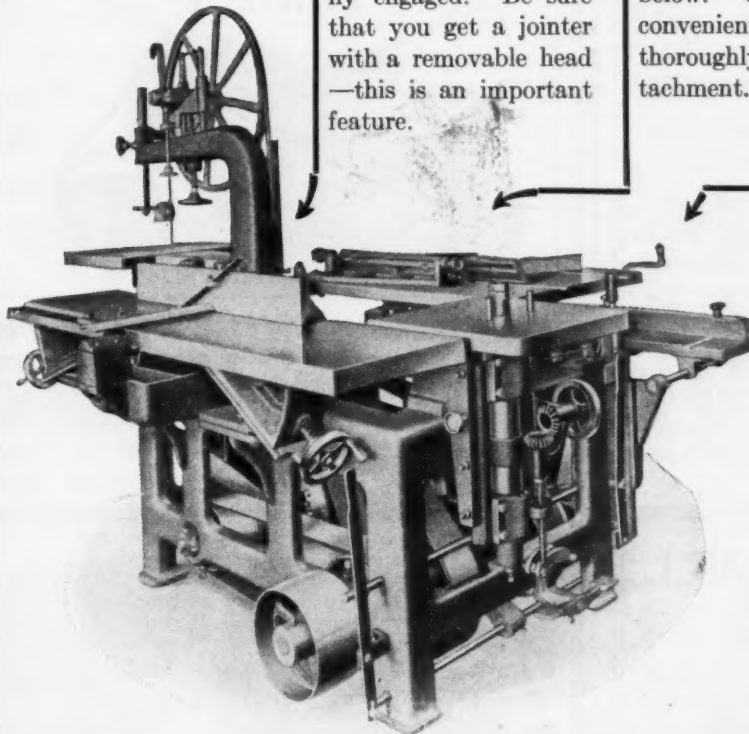
In the average shop the five attachments—which form the standard machine—have been found most desirable. Nearly a score of special attachments, however, are built for the Special No. 31—and if you will ask for list of attachments—we will quote on any arrangement that suits your needs. Thus, at the

cost of a STANDARD machine—or but little extra—you can have a SPECIAL machine assembled for your work.

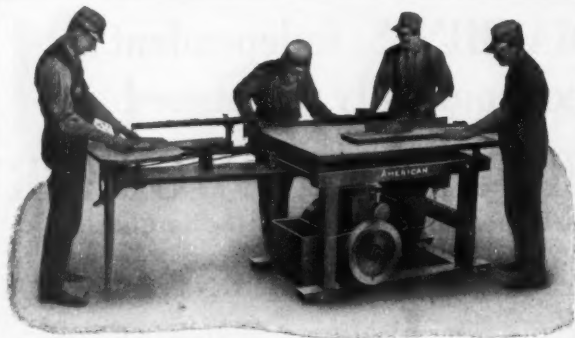
5

A good Borer is essential in the well equipped shop. This is one of the finest of "Famous" types—it's a part of the regular machine.

Ask for the catalog No. 12, which gives interesting information on machinery and special details on the "Famous" line.



Sidney Tool Company
SIDNEY, OHIO



What is Your Percentage of Lost Contracts?

A contractor in New Jersey writes us: "I have lost only one of the jobs I bid on, since I put in your ('American') Wood-Worker."

Here's a man who knows from experience just how much his "American" Wood-Worker will save him on his costs, and is able to under-bid his competitors by that amount.

Doubtless also, his customers take into consideration the fact that this man has an "American" Wood-Worker and will therefore do work that much better and faster than the contractor who hasn't one.

As a result, this contractor has secured 99 per cent of the contracts he bid on. And he credits that showing to his "American."

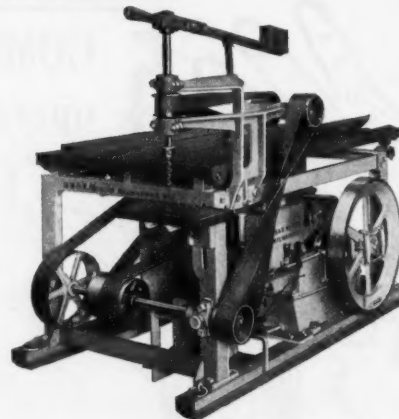
Order **your** "American" now—and be ready to figure **right** on spring business.

Send for the "American" Pamphlet No. 47.

AMERICAN SAW MILL MACHINERY CO.

80 Main Street
HACKETTSTOWN
NEW JERSEY

1360 Hudson Terminal
NEW YORK CITY
NEW YORK



C. H. & E. Portable SAW RIGS

Hoists, Elevators,
Pumps, Mixers,
Engines

C. H. & E. Manufacturing Co., Inc.
322 Mineral St. Milwaukee, Wis.

A Portable Bench Planer



WALLACE BENCH PLANER

Either Belt or Motor Driven

This machine will take as **heavy** a cut as the largest planers. It is not flimsy, but as durable as the costliest machines. It is **light** and **cheap** because we got down to **fundamentals**. It is fully guaranteed, and will be sent on trial anywhere.

Easily portable, can be carried to the job.

Stands on bench without fastening.

Table adjustable to any depth of cut.

Fence adjustable to any angle.

Runs from an electric light socket.

Capacity, any length, and up to 4 inches wide.

Length of tables over all, 18 inches.

Weight of machine with motor, 50 pounds.

Our descriptive folders give full information.

J. D. WALLACE

525 W. Van Buren Street - - - CHICAGO

The A-1 carpenter, craftsman or mechanic



Is the man who has good tools,
knows how to use them and how
to take care of them.

Carborundum Sharpening Stones

are found in the tool kits and
on the work benches of thou-
sands of just such workmen.

Carborundum Stones cut quick
and clean—they hold their
shape, they last and they do
not fill or glaze—there is a
Carborundum stone for every
sharpening need.

From your hardware dealer.

*Let us send you complete catalog and "The Romance
of Carborundum."*

The Carborundum Company
Niagara Falls, N. Y.

Straight-grained cedar that cuts
like cheese; smooth, tough leads
that make clean-cut, strong marks
—that's the way Dixon's Carpen-
ter Pencils are described. Send
16c for generous sample lot 183J.

JOSEPH DIXON CRUCIBLE CO.
❖❖❖ JERSEY CITY, N. J. ❖❖❖

Miller's Lock Mortiser

TWO MINUTES

Will cut an opening in a door for a mortise lock
IMPROVED AND UP-TO-DATE
cuts true, in any kind of wood for any size lock
from $\frac{1}{2}$ " to $1\frac{1}{2}$ " thick. Easy to operate; durable
in construction. Builders
use it everywhere.



Sent subject to trial.

A. W. Miller Mfg. Co.

Riverside, Calif. - Cincinnati, Ohio

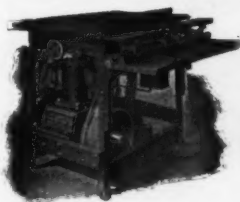
Our Butt Mortiser and Rule Gauge for 75c., Postpaid

GENUINE BANGOR

Roofing Slate
Structural Slate
Blackboards

Large Facilities, Prompt Deliveries
EAST BANGOR CONSOLIDATED SLATE CO.

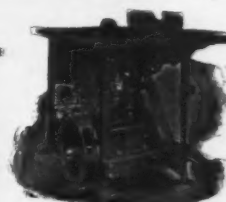
East Bangor, Pa.



**Standard Portable
Combination
Woodworker**

9 Machines in 1
6 H. P. ENGINE

SEND FOR CATALOG G
ATLANTIC ENGINE CO.
Meadville - Penna.



WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN CARPENTER AND BUILDER



Carpenters' Adze



Framing Chisel



Butt Chisel

White "QUALITY" Tools

Does It Pay?

to buy the higher priced tools when you can buy a cheap tool that is **guaranteed**?

What Does "Guaranteed" Mean?

If you buy one of the cheap guaranteed tools and it breaks, you get another one—maybe. The quality of the second no better than the first?

When you get through, you have wasted time enough to pay for several really good tools and still have only a poor tool to show for it. Cheapness is a poor investment in buying tools. Get the best. Insist upon the "quality" tools. If your dealer won't get them for you—send for our Catalogue.

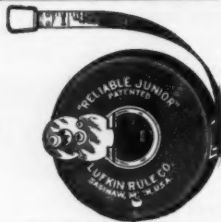
The L. & I. J. WHITE CO., 10 Columbia St., BUFFALO, N. Y.

Articles Every Carpenter Needs

**Boxwood
Folding
Rules**

**Spring Joint
Rules**

Steel Rules



**Steel
Tapes**

**Woven
Tapes**

**Pocket
Tapes**

We guarantee to YOU absolute satisfaction
CATALOG ON REQUEST

When in need of these
say to the hardwareman

THE LUFKIN RULE CO.
New York Saginaw, Mich.

LUFKIN



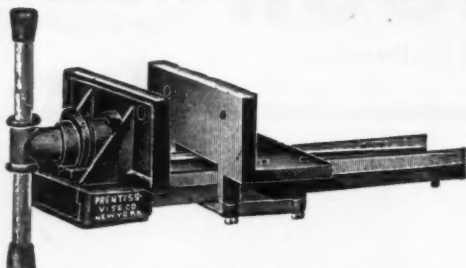
Why Carry A Heavy Transit?

Architects, Contractors, and Builders, this is the serviceable instrument for you. A portable transit that is of special light design. It is easily carried and handled. Is thoroughly accurate and especially adapted for fast work. Built upon practical substantial lines. We manufacture a complete line of surveying instruments in various sizes and at a wide range of prices.

All instruments guaranteed by us. Our Circular No. 27 will explain our instruments to you in detail. It will pay you to get it before deciding upon any surveying instruments.

KOLESCH & COMPANY, 138 Fulton Street, NEW YORK
Surveying Instrument Makers. Established 1885.

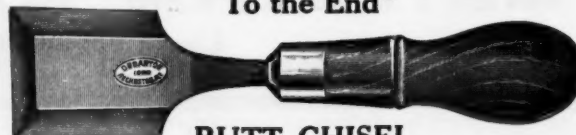
BLAKE QUICK ACTING VISE



For Cabinet Makers and Wood Workers. Simplest—Strongest—Cheapest—Best.

Send for Catalogue of all kinds of Vises.
PRENTISS VISE COMPANY, MAKERS
106-110 LaFayette St., New York, U. S. A.

"Last a Lifetime and Give Satisfaction To the End"



BUTT CHISEL

TRADE MARK

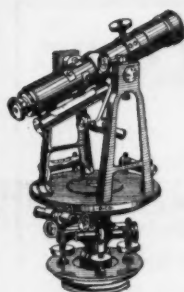
The celebrated Barton Planes and Edge Tools for carpenters and all other woodworkers are unequalled by any other made for keen, hard, smooth cutting edges. If your hardware dealer does not handle

THE CELEBRATED BARTON TOOLS

Send direct for catalogue and our free story book, True Stories. Be sure to specify "CARPENTER'S CATALOGUE."

MACK & COMPANY,

20 BROWN'S RACE
ROCHESTER, N. Y.



Builder's Transits

For the builder or architect who wants to raise the standard of his work—who takes conspicuous pride in the accuracy of his efforts, this transit is especially designed. It is but one of the complete line of Beckmann quality instruments. Send for our complete *free* catalog.

The B. L. BECKMANN CO.

7500 Adams Street :-: Toledo, Ohio

Two Instruments for the Price of One

When in need of an Architect's Level or a Builder's Transit do not fail to investigate our

Transit-Level

It is convertible and will serve as a first class Builder's Transit as well as an Architect's Level. If you should have use for an instrument at all you should buy this accurate, durable and most serviceable instrument which is without question the leader as to general usefulness among all instruments on the market. It has no equal for Efficiency and Economy. To keep abreast of up-to-date methods send for Catalogs and Circulars and be informed as to the latest and best.

GEIER & BLUHM

672 River Street, Troy, N. Y.



(Pat. Pending)

In Building Construction



the necessary accuracy of lines, levels, etc., demands the use of a reliable transit or level. Our Model No. 35

"STERLING" Builders' Transit

exactly fills this requirement and at a price within your reach.

Write today for Circular No. 35 and details of **FREE TRIAL OFFER.**

WARREN-KNIGHT CO.

Makers of

"Sterling" Transits and Levels

136 No. 12th Street

PHILADELPHIA, U. S. A.

\$39.00 SPECIAL HOLIDAY OFFER \$39.00 BUILDER'S LEVEL

This accurate, durable and easily used instrument, regular price \$45.00, will be shipped anywhere, express prepaid, during next 30 days for only \$39.00, draft or money order or C. O. D. subject to examination. Has powerful 12 in. telescope with magnifying power 25 diameters, capable of reading target at 1000 ft. Use the level on job for 10 days and if not perfectly satisfied, ship it back, charges collect, and your money will be refunded without quibble. Telescope is adjustable at both ends. Long level to telescope. Instrument made of very best material throughout. Strong ash tripod. Polished hardwood case, with usual accessories. Full directions with each instrument. Don't put off buying, but send in your order today. Ask for illustrated catalog, showing various styles of Levels and Transits.



No. 2011. \$39.00

DAVID WHITE CO. (Inc.)

419 E. Water St.

MILWAUKEE :-: WIS.



Rent This Level 10 Months Then It's Yours

Builders and Contractors

This is not an old style Level. It is the newest 1915 model convertible level. There is not a single Builder or Contractor who has not almost daily need of this instrument. For laying out buildings, locating foundation piers, leveling up foundations, walls and floors, aligning shafting, walls, piers, etc., for getting angles, locating levels anywhere, ditching, laying streets and walks, running straight lines, and a hundred other uses.

Instruction Book Free

Complete illustrated booklet, telling how a builder or contractor can use the convertible level, sent free on request.

WARNING

The Level we offer is the new Aloe Convertible Level. Don't confuse the Convertible Level with the ordinary old style Architect's Level. The only work that can be satisfactorily done with the ordinary Architect's Level, is the determining of elevations. But the Convertible Level, besides its use as a level, is a modified transit and broadens the use of the level 100%. You can't afford to buy any but the Aloe Convertible Level.

HALF CENTURY REPUTATION

We have been manufacturers of transits and levels since 1863, and our instruments are the standard of the world.

FREE TRIAL

We allow you to convince yourself by a trial of the instrument before you obligate yourself.

THE RENT BUYS IT

No large cash outlay needed. Just pay the rent for a few months and the instrument is your absolute property.

Send Coupon---No Obligation

Send the attached coupon today and we'll send illustrated booklet and complete details of how you can own the Aloe Convertible Level for 10 months' rent.

A. S. Aloe Co., 621 Olive St., St. Louis, Mo.

COUPON

A. S. Aloe Co., 621 Olive St., St. Louis, Mo.
Please send free instruction book on the use of the Convertible Level and complete details of your rental plan. This request in no way obligates me.

Name

Occupation

Street

City..... State.....

Am.C.&B.-Dec.'14

The Easiest Way to Cut Through a Floor

D 19 FLOORING SAW



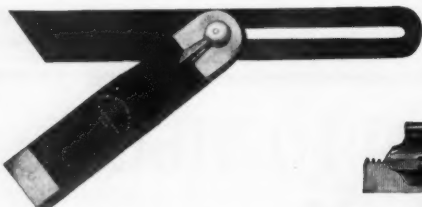
THE old method of boring holes and chiseling when it was necessary to cut out sections in floors, partitions or ceilings was time-consuming and troublesome.

This work can now be done quicker and easier by the use of our new D 19 Flooring Saw, especially designed for the purpose. Not only is the work done rapidly and with less trouble, but sections cut out with it can be replaced in the original position if desired.

This saw has an adjustable cherry handle, carved and polished, which permits blade to be set in various positions. The blade itself is reversible and interchangeable. It is held firmly in place by patent bolt and ratchet.

Special attention is called to the reversible feature of the blade. In this way either the straight or curved edge of the blade, both of which are toothed, can be used to the best advantage.

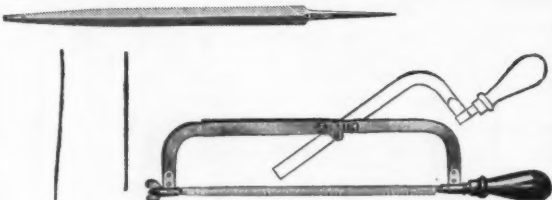
Sizes 16, 18 and 20 inches.



Hand Saw Jointer



DISSTON BRAND GOODS
QUALITY GUARANTEED



HENRY DISSTON & SONS

Incorporated

Keystone Saw, Tool, Steel & File Works
PHILADELPHIA, U. S. A.

RELIABLE and SAFE



The Sebc method offers the only absolutely dependable means of attaching railings, gradings, iron doors, window frames, pipes, shafting machinery, electrical apparatus and plumbing fixtures of every description.

SEBCO

Expansion Bolts and Screw Anchors assure quicker, neater and more substantial work.

Our catalog illustrates and describes many different ways of attaching fixtures that you should know about. Send for your copy.

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Everywhere

**STAR EXPANSION
BOLT CO.**

147 Cedar Street
NEW YORK

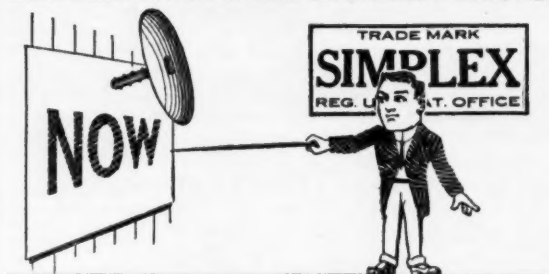


Get a
FREE
Sample of
STINE SCREW HOLES

We want to acquaint all Carpenters and Builders with this new invention, so we will send without obligation a free sample to those sending us their name and address. Make your own demonstration; we know you will be satisfied with the result. We have solved the Screw Hole Problem. Send today.

STINE SCREW HOLES CO., Review Building, Decatur, Illinois

BETTER ROOFS and BIGGER PROFITS



Send for free samples of
SIMPLEX ROOFING NAILS

H. B. SHERMAN MFG. CO.

Battle Creek, Mich.

From the Raw Steel to the Finished Saw—

Every step in the manufacture is handled by men skilled in their Art. Each process is handled by experts. Every saw is carefully inspected and tested before being forwarded to the next department. When the final test and inspection has been made, Geo. H. Bishop & Co. place their seal of warranty on the saw and you have the Product of the Greatest Saw-Making Organization in the World.

THE GREYHOUND

A Saw that will run fast and cut easy. A Saw finely adjusted, tough and flexible.

Good Mechanics appreciate good tools. We offer these Saws, confident that they will please you, recommend them to your fellow builders. They are a superior Saw and will serve you long and well.

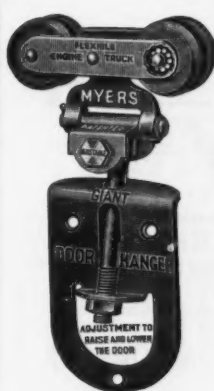
We refund money if 30-day trial does not prove our guarantee.

Geo. H. Bishop & Co.
Lawrenceburg, Ind.



Prices

Made in Both Straight and Skew Back, also Ship Carpenters Pattern.
Length, 18 in. \$2.35 net
Length, 20 in. 2.50 net
Length, 22 in. 2.65 net
Length, 24 in. 2.80 net
Length, 26 in. 3.00 net
Length, 28 in. 3.30 net
Length, 30 in. 3.65 net
Packed one in a box.

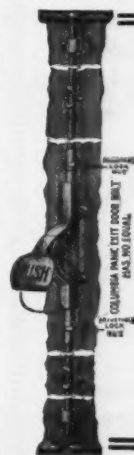


THE MYERS GIANT ADJUSTABLE TANDEM DOOR HANGER

for TUBULAR GIRDER TRACK is adjustable to and from the building, and up or down as necessary. Has flexible engine truck with steel rollers revolving on steel roller bearings. The adjustable features prevent trouble from weather conditions or sagging of building. Storms, sleet or ice do not affect it, owing to complete protection afforded by the tubular track. Track and Hanger are constructed to carry and operate heavy doors easily.

This and other styles of Tubular and "Stayon" Door Hangers are shown in our Door Hanger Booklet. Copy mailed on request.

F. E. MYERS & BRO.
ASHLAND, OHIO



FIRE—Excitement reigns supreme!
Panic—In a twinkling of an eye.
Exit—The terror-stricken rush.
Door—Though tightly closed—
Bolt—Columbia opens with a gentle push.

Full information upon request.

**The Columbia
Iron & Wire Works Co.**
Canton, Ohio



**This Pearson's Automatic
SHINGLE NAILER
WILL PAY FOR ITSELF
ON FIRST JOB**

Do your nailing fast—faster than ever before. You can use this Pearson's Nailer on any pitch roof. Wear mittens, gloves, etc. This "Hand Nailer" is the only Nailer—throw

nails in by the handful—then start nailing. Nails easily driven through tin or quite heavy sheet iron.

These nailers are made in two sizes—The BLUE Nailer for 3d. common No. 14 gauge wire nails.

The RED Nailer for 3d. galvanized No. 13 gauge 1 1/4-inch wire nails.

It will come right to your door, quick, by insured parcel post, all prepaid for only \$5.00.

IT MAKES GOOD.

PEARSON MFG. CO. - ROBBINSDALE, MINN.

C. G. HUSSEY & CO.
Pittsburgh, Penna.

MANUFACTURERS OF **COPPER**
In Sheets, Plates, Rolls

CORRUGATED COPPER CONDUCTOR PIPE



Copper Nails, Copper Rivets, Conductor Pipe, Eaves Trough, Elbows, Shoes, Mitres, Soldering Coppers, Gaskets, Etc.

DID YOU ever stop to think, when you go into a hardware store, or tool shop, to make a purchase of a tool for a general or particular purpose, that the quality of the article is of prime importance to you? Do you realize that a cheap tool, poorly made, is cheap at any price, for it not only wastes your money but wastes your time and material as well? Do you realize that the cost of quality is something you can pay for and get better returns upon than almost any other investment? Did you ever think that in the great majority of instances the cost of quality added to the price you will pay for a cheap and sometimes worthless article will generally give you a good one?

Special tools are now constructed and on the market for almost every conceivable purpose; these tools are in reality small machines and must be constructed as such if they are to give you satisfaction and perform the functions which you desire to have them perform faithfully and well.

It has been our aim in the making of 1500 or more tools or devices, which we are now manufacturing for the market, to see; first, how well we could make them, and then endeavor to sell them at as low a price as anybody could possibly produce an article of like quality for. Bear this in mind when you are buying tools and then, after you have bought them, don't use them for purposes you know they were not intended.

The more functions a tool performs, the more mechanism it must contain. Your watch, your victrola, your piano, your automobile, if you have one, or all of them, require a given amount of care and attention in order to keep them at their best. Your tools should be similarly treated. A crowbar can be carelessly handled, but a leveling transit cannot. The life of your tools will be greatly prolonged, their efficiency increased many fold, if they are carefully and properly handled, and kept oiled where and when necessary.

We issue a complete catalog, showing 1500 different articles, some of which we know will interest you. It is free for the asking. Perhaps it will help you when you want to buy. If you will study it—and it pays to study every page—you will become familiar with a product, in the making of which **QUALITY** is a sacred watchword.

Goodell-Pratt Company
GREENFIELD, MASS.

I Made \$50,000 In 10 Yrs.



—and you can do as well in the house moving business. Let me show you how to get started. You can have the benefit of my experience and save yourself many of the hard knocks I got at the start.

\$200 to \$300 Starts You

With this small investment you can start in a profitable, big paying business that is just teeming with opportunities for the live wide-awake fellow. When you get full details of my proposition and learn how easy it is, you'll say "why on earth didn't I ever think of it before"? Write me tonight. Just say "Show me how I can make \$3,000 to \$5,000 a year moving houses."

E. W. La PLANT, President
La Plant-Choate Mfg. Co.,
620 Eastlock Court
CEDAR RAPIDS, IOWA



CALDWELL SASH BALANCE



Does away with weights and cords, and **VASTLY** more durable.

Makes sashes work perfectly.

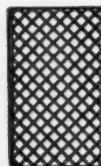
Permits greater window space in new work, as box frames are not necessary.

May be applied to old windows without altering sashes or frames.

Write for circular to the

Caldwell Mfg. Co.
15 Jones Street, Rochester, N. Y.

Wire Window Guards



Counter Railings
Elevator Enclosures
Tubular Hand Rails
Brass and Bronze Work

The Cincinnati Mfg. Co., Cincinnati, O.

RED DEVIL BITS

SINGLE OR DOUBLE TWIST

HONED LIKE A RAZOR, NOT SIMPLY GROUND, BUT TRUED ON A LATHE

Red Devil Bits are made with 10% greater clearance than any other. Will drill with or against the grain, in any kind of wood, and under any conditions.

If your dealer can't supply, send \$5.25 for set No. 2401 of 32 1/4 quaters in wooden box.

At any rate, send for Booklet of 3,000 Red Devils.

SMITH & HEMENWAY CO.

156 Chambers St., NEW YORK CITY

The Red Devil Bit—Always Makes a Hit



AN EXCELLENT CHRISTMAS PRESENT

For Carpenters—Architects—Mechanics—Etc.



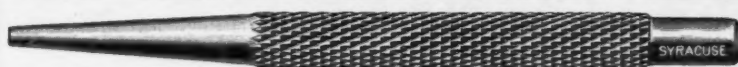
Inter-Locking Master Slide Rule

Makes all Measurements (Inside and Out)

Two Rules in one. Will accurately measure the inside of doors, casings, cupboards, cabinets, furnaces, etc. Made of select boxwood, rigid, strong and rust-proof. One side gives outside measurements and one side inside measurements. Slides pull out automatically when key spring is pressed, and closes easily.

The Master Slide Rule costs only 15 cents per lineal foot at your hardware dealer, or send us 15 cents per lineal foot and we'll send you any length desired. Write for complete illustrated circulars.

DAHL MANUFACTURING CO., 51-G East 42nd St., New York City, N. Y.



NAIL SETS

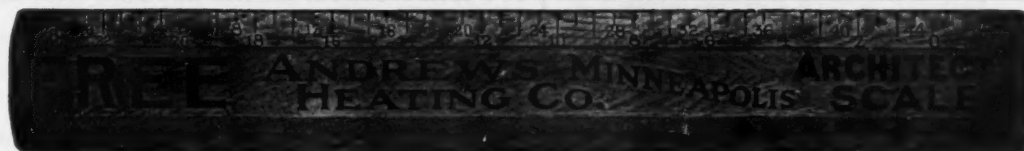
"SYRACUSE" NAIL SETS

give the most service because they are the best made. Each point is carefully cupped and tested on steel before being sent out. Knurling is sharp and clear cut to give a firm grip.

3 SIZES—2-32"—3-32"—4-32"—Price 10c each.

If your Hardware Dealer cannot supply you we will send any number at 10c each. State size wanted.

Syracuse Twist Drill Co., Syracuse, New York



Send us two or more names of persons who are interested in or want to buy Hot Water Heating Plants and we will send you this scale. Back inches are divided into 8, 10, 12, 20, and 40 parts. Also free catalog on request. Mention this paper.

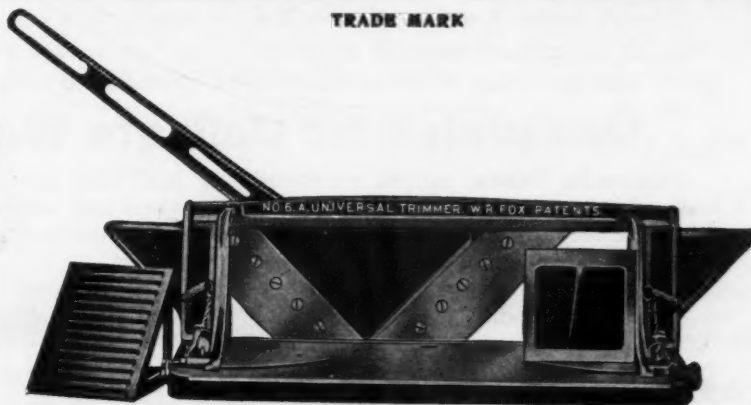
Andrews Heating Co., 1431 Heating Bldg. Minneapolis, Minn.

FOX

"UNIVERSAL TRIMMER"

TRADE MARK

A
Machine
For
Every
Need



SA. FOX "UNIVERSAL TRIMMER"

A
Need
For
Every
Machine

You Will Never Know What Perfect Work is Until You Use a Fox "Universal"

The fitting of interior finish is greatly improved by using a Fox Universal.

Write TODAY for Our New Catalog

FOX Machine Co.

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GRAND RAPIDS, MICHIGAN



Saves Many a Dollar

where the dollars count. Fitting fancy sash by hand is expensive and the work is not as accurate and neat as turned out by this machine. This machine should be in every shop.

The American Sash Trimmer
Guaranteed to Save 75%

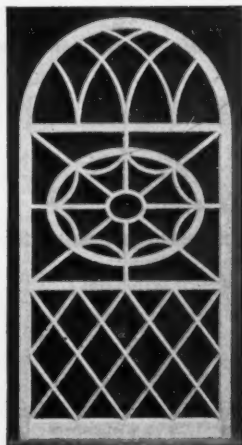
a broad statement to make, but we'll be glad to prove it to you. Send for particulars about our FREE Trial Offer.

Sample of Work

This machine cuts all angles accurately without splintering or chipping the wood. No time lost, no trouble. This machine can also be equipped with a mortising attachment, with various sizes interchangeable chisels. This is valuable on ordinary sash as well as fancy sash. This slight additional cost makes two machines out of one.

Write for descriptive folder and details about our FREE Trial Offer. Address

The Heald Machine Co.
2 New Bond St.
WORCESTER, : MASS.
24 So. Jefferson St., Chicago



NEW!

You know the old, reliable Cannon Ball Barn Door Hanger—competitors have been trying to equal it for years and haven't hit the mark yet.

Well—if such a thing is possible—we've improved the Cannon Ball—made an addition which gives the user protection plus.

A cover for Cannon Ball track—as illustrated above, is now to be had at nominal cost with new track. It gives the finishing touch of protection—makes the outfit positively weatherproof in every respect—keeps rain and weather away from the hanger and top of the door itself—and adds but little to the cost.

New Track For Cannon Ball Barn Door Hangers
Now Furnished With Cover If Desired

Write for detailed information—prices, etc. In addition to the largest line of door hangers, we make the best barn equipment, too. Ask us.

Hunt, Helm, Ferris & Company
304 Hunt St. HARVARD, ILL.



"A Bit of Utility"

Guided by its circular rim—instead of its centre—the Forstner Labor-Saving Auger Bit will bore any arc of a circle, and can be guided in any direction.

Doesn't matter how hard the wood is, no consequence whether it is full of knots, or the grain awkward to negotiate. The Forstner Bit works with equal smoothness under any condition and leaves a true polished surface on every job.

Unequaled for Delicate Work

Supercedes chisels, gauges, scroll-saws, or lath tools combined, for all kinds of delicate work. Cabinet and pattern makers and carpenters are enthusiastic because they do more work than other bits and cost no more.

We can offer something special in the matter of price on sets packed in a sensible box. Send today for particulars and catalog.

The Progressive Mfg. Co.
Torrington, Conn.



ROOF SLATES

STRUCTURAL SLATE BLACKBOARDS

E. J. JOHNSON
38 Park Row New York
Quarry Operator
BLACK, GREEN, PURPLE, RED

Booklet, Samples and Prices on Application

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN CARPENTER AND BUILDER

In the Beautiful New Post Office Washington, D. C.

There are 188 dozen of these
"American" Sash Pulleys.

WRITE FOR ILLUSTRATED CATALOGUE

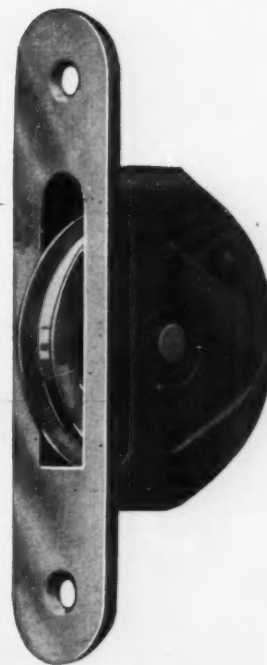
The American Pulley Co.

PHILADELPHIA

NEW YORK

BOSTON

CHICAGO



"Government-Approved"
Patented

A SAND'S ALUMINUM LEVEL WOULD MAKE A FINE XMAS PRESENT



The custom of giving useful Christmas presents is growing every year. A present that will last a long time and will serve as a continual reminder of the giver is the one to select. A gift that would delight any mechanic and be the cause of a friendship that will last a life-time is a **SAND'S ALUMINUM LEVEL**.

Price for 24-inch, \$4.25 - for 30-inch, \$4.75

If your hardware dealer cannot supply you with **SAND'S ALUMINUM LEVELS**, we would be glad to send you one, postage prepaid, upon receipt of price. **WRITE** for our circular showing full size pictures of 24-inch and 30-inch aluminum levels in 4 beautiful colors, just like seeing the actual levels themselves. It is **FREE**.

J. SAND & SONS

1023-25 Rivard Street

DETROIT, MICHIGAN



IDEAL XMAS GIFT

Our "VANDOR VANADIUM" Nail Hammers in four sizes, No. 21½, 16 oz. Standard; No. 22, 13 oz. General Purpose; No. 22½, 10 oz. Finishing; No. 721½, 16 oz. Rippling Style. We will send either size Parcel Post for your Dealer's name and \$1. This Hammer we insure for life. Made for hard work and lots of it. You can return it any time if it proves defective and get a new one.

This Hammer is warranted to draw anything from a headless brad to a spike.

Drop Forged from the toughest Vanadium Steel. Second growth hand shaved Hickory Handle. Tempered in oil. Easy to work with. Get one today. Remember only \$1 and your dealer's name for either size, 16 oz., 10 oz., 13 oz., or 16 oz. Rippling. Mail your order NOW.

VAN DOREN MFG. CO., INC. Chicago Heights, Ill.
(Vanadium Dept.)



1853

BUCK



BROS.

1914

Fine Beveled Edge
Shank and Socket

Chisels

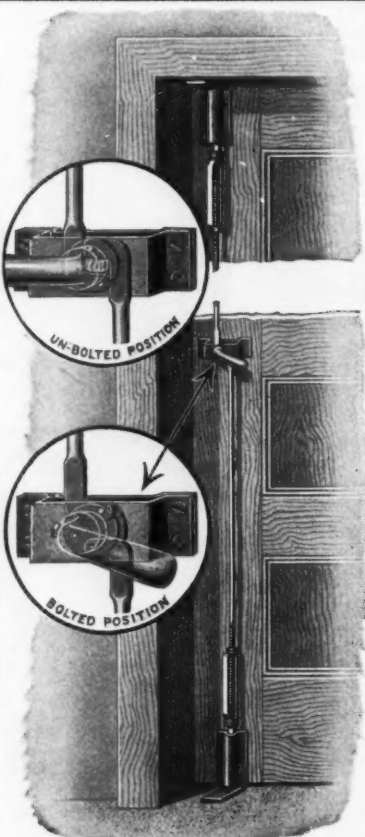
Tang and Socket Butt Chisels

Plain and Beveled Edges

Send for illustrated Catalog

Buck Bros., Millbury, Mass.

Double Locked



A dependable lock is of great importance on the garage to guard the valuable contents.

It is your duty to guard your client's garage.

No. 517 R.-W. Top and Bottom Bolt for Garage Doors

MADE IN TWO SIZES

Locks doors at both top and bottom with one movement of lever handle.

So constructed that when bolted or unbolted the ends of connecting rods, where attached to the lever handle are off center so that bolt maintains its position by gravity and cannot be changed except by moving the lever handle.

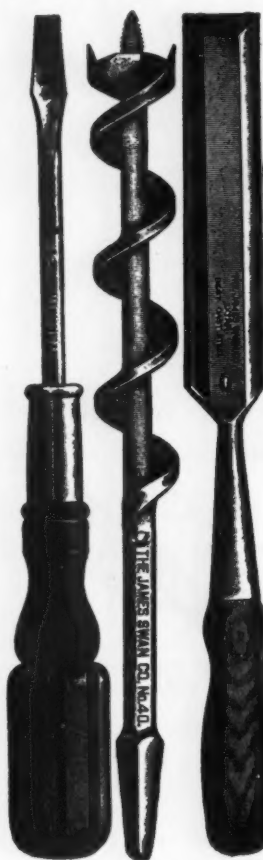
Made in two sizes and adjustable for doors of various heights. No. 1 for doors from 7 to 8 ft. high. No. 2 for doors 8 to 9 ft. high. Furnished for other height doors if required. Adjustment is positive and is securely locked. Suitable for use on inside of building.

A
hanger for
any door
that slides

Richards-Wilcox

MANUFACTURING CO.
AURORA, ILL. U.S.A.

Richards-Wilcox Canadian Co. Ltd., London, Ont.



When
you want
tools of any kind
—tools that you
can bank on to be
just the kind and qual-
ity you want them to
be, insist on the Swan
Trade Mark.



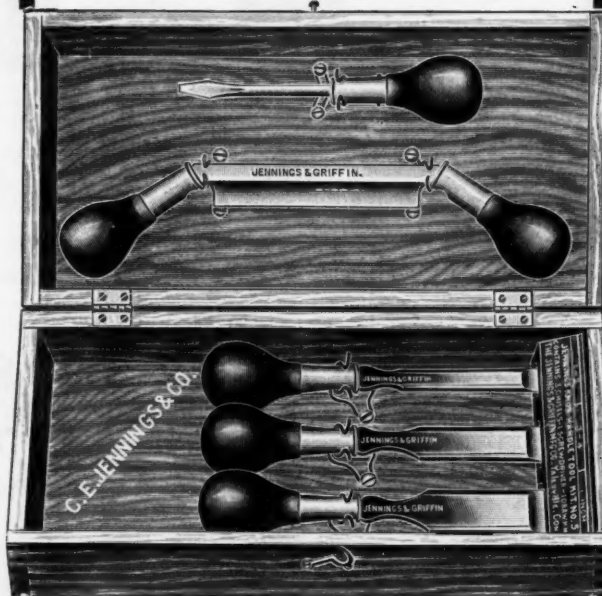
It's a plain guide to all that
is best in carpenters' tools
and your assurance that
you are dealing with an
old, reliable firm that
makes tools as good and
solid as its reputation.

ASK FOR CATALOG
The
JAMES SWAN CO.
Seymour,
Conn.

C. E. JENNINGS & CO.'S

71-73 MURRAY ST., N. Y., U. S. A.

Knob Handle Tool Kit No. 5



"Made in America."

Handsome, Useful, Moderate in Price. Write
for circular of C. E. Jennings Little Wonder
Tool Kit No. 60. A great holiday trade seller.

AGENTS WANTED FOR OUR FULL LINE OF MONEY-MAKING SPECIALTIES



All big sellers. Big profits for you. Every home a possible customer. Absolutely necessities. Simple demonstration sells them. Every housewife wants them.

Barnett Vacuum Cleaner—Absolutely new. Easy to operate. Lasts a lifetime. Best and cheapest on market. **Guaranteed for one year.** Powerful suction.



Barnett Clothes Line Reel—Convenient, handy and dust proof. Just what every housewife has been looking for.

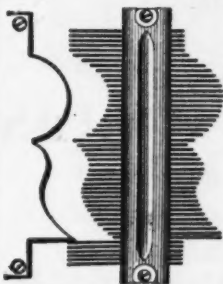
Barnett Gasoline Lamp—Best, safest, and most economical lamp on market. A child can operate it. **GUARANTEED.**

Write immediately for price, territory, and literature on all our lines.

Jos. G. A. Barnett & Co., Riverside, Iowa



Reinhardt Profile Gauge or Adjustable Templet



is a special tool that **YOU** need to take profiles or to reproduce irregular curves and surfaces. Made in various styles and sizes to meet every want.

If not sold by your dealer, write us for illustrated price list.

Little Brother (demonstrator) mailed on receipt of 15c

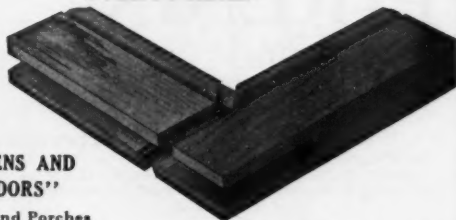
Warren Profile Co.

103 Chambers Street, New York

We Want Reliable Carpenters, Builders and Material Men EVERYWHERE

To Act As
Our Agents
To Take
Orders for

**MADE TO
MEASURE
"FLY SCREENS AND
SCREEN DOORS"**



For Dwellings and Porches

Nice Proposition and Exclusive Territory — WRITE AT ONCE

We use the best grade of wire, black enamel, galvanized, pearl, peerless and copper bronze, fastened by the improved **Standard Shoulder Strip Method**, which makes the wire drum tight and firm, cannot sag or pull away.

STANDARD SCREEN CO., 1848-58 Hastings St., Chicago



No. 5155

37c For This Lock Set

**No. 5155 Antique
Copper Finish**

FREE—No. 5. Builders Hardware Catalog and net price list to Contractors and Material Men.

We do not sell to contractors or carpenters in Cook County, Ill.

Rehm Hardware Co.

1501 Blue Island Ave.
CHICAGO, ILL.

Stanley Tools



No. 239 Dado Plane

A New Stanley Tool

This Plane has an extra narrow cutter, only $\frac{1}{8}$ of an inch wide, making it an ideal tool for blind wire grooving as well as for many other purposes.

It is fitted with a double spur which prevents splintering when working across the grain and insures a smooth, clear cut.

A depth gauge is also attached allowing a groove to be cut of any desired depth up to the limit of the plane — $\frac{1}{2}$ of an inch. Length over all $7\frac{1}{2}$ inches — weight 1 lb.

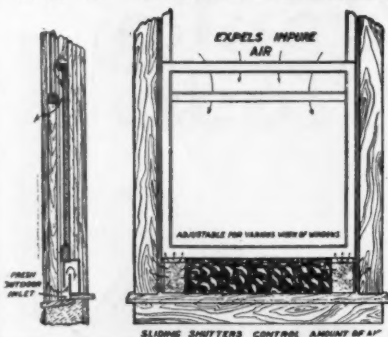
Price, Each, \$2.20

If you cannot procure same from your Hardware Dealer, we will be pleased to forward you one, postage prepaid, upon receipt of price.

Address

**STANLEY RULE & LEVEL CO.
NEW BRITAIN, CONN. U.S.A.**

A PORTABLE VENTILATOR—Not Built in



Simply Open Window and Set in

Fresh Air in any room without Draft. Absolutely Snow-proof—Rain-proof—Dust-proof. The popular feature of this Ventilator is that it is adjustable and can be changed instantly from one window to another. Equipped with screened openings and sliding shutters enabling you to regulate amount of air entering. Every room with one of these has an efficient Ventilating System.

These Ventilators are made of heavy grade of Sheet Metal, finished with a beautiful oxydized copper making it rust-proof and durable.

There's Money in it for you---Become our Agent

Become our Agent. We want Builders to recommend and sell these Ventilators for us. Recommend them to your clients. They will yield you a handsome profit and give complete satisfaction. Write to us now for particulars.

Fresh Air Ventilator Company :: Grand Junction, Iowa



Monitor Cupolas

Should be on every barn you build. They come all put together. No frame to build under roof. Can be erected in five minutes. Absolutely Bird and Storm proof. We sell direct to contractors where we are not represented by dealers. Write for our special proposition to contractors and our complete catalog of Ventilators, Cupolas, Skylights and Sheet metal Specialties.

B. F. Lichty & Sons Co.
Sta. A, WATERLOO, IOWA

No. 70S

No Putty
No Solder

WILLIS SKYLIGHTS

have largest glass area. Well made, strongly reinforced. Will not buckle, sag or spread. We can furnish Skylights in all shapes and sizes. Willis Skylights are guaranteed water-tight.

Write for our Large FREE Catalog of Builders' Sheet Metal Specialties, Skylights, Ventilators, Store Fronts, etc.
WILLIS MFG. CO., Galesburg, ILL.

Put These Windows In the Next Hog House You Build

They are made to use on any hog house, old or new. Easy to install. They will please the man you are building for. They will make a profit for you.

New Idea CHIEF SUNSHINE WINDOWS

Let the sunlight into the hog house where it's needed. Keep hogs healthy and strong.

Windows are made so you can shingle over flashing top and sides. Lower flashing comes over shingles. Perforated trough lets water run off, prevents leaking. Galvanized screen protects glass. Copper clips hold glass. No putty needed. The only modern scientific-

ally correct hog house windows on the market. Investigate. One hog house in a community with these windows brings more business for you. Write for prices.

CHIEF CUPOLAS

The best cupolas made. Rain, snow and bird proof. We have complete stock of cupolas of every size for every purpose. Strong, well made. The kind that please you because they are easy to handle and give satisfaction at low cost. They please your customers. Write today. Get descriptive circular and prices. Also full particulars of our silo roofs, silo chute and other galvanized products.

Address

SHRAUGER & JOHNSON
430 Johnson St., Atlantic, Iowa



PHOENIX INSIDE SLIDING BLINDS

WILKES BARRE, PA.

The Phoenix Sliding Blind Co.

Enclosed find my check for blinds. I am pleased with them and sorry I did not have them put throughout the whole house.
C. W. BURT.

Comfort!
Economy!
Convenience!

The latest improved springs and corrugated steel rods put the "PHOENIX" far in lead of less improved styles. Write for Catalogue "C" and free samples, showing construction.

PHOENIX SLIDING BLIND CO.

BRIDGE & CANAL STS.

PHOENIX, N. Y.

THE GALE

BARN AND GRANARY VENTILATOR

For all your buildings

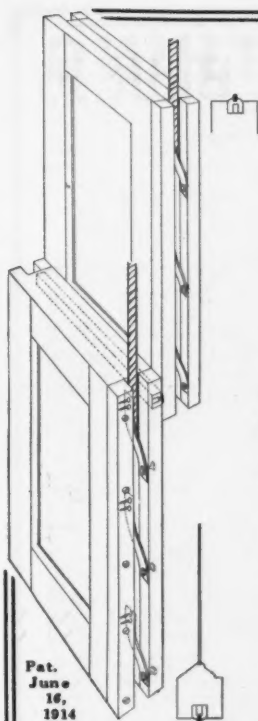
INEXPENSIVE, BEAUTIFUL, STRONG

Made of heavy galvanized iron. Screened inside. Storm-proof and bird-proof. Perfect ventilation guaranteed. All you have to do is to place ventilator on roof and nail fast.

Write for Illustrated Circular with Complete Prices.

Galesburg Sheet Metal Works,
Galesburg, Illinois





Better than Weatherstrip *The* ERLINDER Window Sash Patent

can be applied to all sliding windows. It absolutely prevents rattling—keeps out draughts and dust. Here is a device that will last as long as the sash, does the same things weatherstrip does and is invisible. Nothing to rust or wear out. Nothing to get out of order or break.

We want all Carpenters and Builders to become Agents for this appliance. Good Money Maker. Equip all your sliding windows with it. Once used you will never think of using unsightly weatherstrip. Easy to install and once installed it's in for good.

Pat.
June
16,
1914

Send for Descriptive Circular giving full information and details. Write to

P. E. ERLINDER

7922 Harvard Ave.

:-:

Chicago



Patented: Nov. 29, 1892
July 19, 1910

A Huther Bros. Dado Head Fits Any Saw Rig

Cuts perfect grooves with or across grain. Simple, no-screw adjustment. The choice of experts.

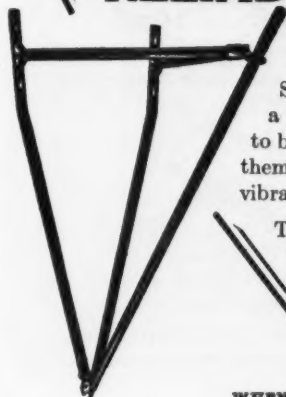
Huther Bros. Saw Mfg. Co.

1101 University Ave.

:-:

Rochester, N. Y.

RELIABLE FOLDING Scaffold Bracket



Strong and safe; requires only a few minutes to attach. No holes to bore. Four 10-d or 16-d nails fasten them securely. Positively rigid; no vibration.

The Low Price of these Brackets can be saved in time and material on the first two jobs.

ELITE MFG. COMPANY

100 Ohio Street ASHLAND, O.



Handy to Carry Handy to Use

Every carpenter, as well as every electrician, needs an extension bit holder. Here is the handiest and best one of all. It doesn't take up much room in your kit when you are not using it, and it's easy to stretch it to the desired length when you have use for it.

MILLERS FALLS EXTENSION BIT HOLDER No. 6

Length collapsed, 16½ in.; length extended, 24 in. Outer sleeve telescopes over inner spindle, combining lightness with strength.

Chuck with four reliable, strong, steel jaws, made in one piece, grips firmly over shoulders of bit stock shanks. Will follow bits of ½ in. and larger into their bores.

Other New Tools You Should Examine

Ask your dealer to show you Millers Falls Brace 872 (the best brace ever made), Star Hack Saw 1027, Hand Drill 1980. These New Millers Falls Tools have improved features that will interest any mechanic who wants to save time and do better work. They also have the high quality and reliability which have won a world wide reputation for the older Millers Falls Tools.

Send for pocket catalog which shows complete line.



MILLERS FALLS CO., Millers Falls, Mass.

WE'LL GIVE YOU A COPY OF THIS BOOK

Every contractor, builder, dealer or owner should have a copy of these specifications. They save time and labor, and cover thoroughly every point, having been prepared by experts. To contractors, builders, dealers, etc., we will furnish these booklets free. Write us today for a copy which will be mailed to you promptly.



**EXPANDED CUP
METAL LATH**
EST. 1877 **SELF - FURRING**

This Lath is ideal for stucco purposes, because it is Self Furring. Mortar will get a perfect clinch when lath is fastened direct to sheathing boards or where passing over wood studs or other obstructions, making a saving in this class of construction of from 4 to 5 cents per square yard over Metal Laths that require furring strips. Sykes' expanded cup metal lath is the best possible for outside or stucco work, but is equally as good for inside work. However, if you prefer a sheet lath, we make—

Sykes Trough Sheet Lath, for ceilings, inside walls, mantel and tile setting, etc. Furnished in either anti-rust (oil) coating, painted black or galvanized. Write us for prices and free samples.

Sykes Wall Ties—Standard, 7 in. long—Sykes Veneer Wall Ties, 6 in. long; extra heavy, galvanized, with cross corrugation. Free Samples.

Sykes Corner Beads—6, 7, 8, 9 and 10 feet lengths. Ten pieces to the bundle. Write us for prices.

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504 Walnut Street, Niles, Ohio

RAILINGS OF ALL KINDS



Elevator Enclosures and
Cabs, Bank Work, Iron
and Wire Guards.

Miscellaneous
ORNAMENTAL IRON
AND
BUILDERS' IRON WORK

DOW

Wire & Iron
Works
LOUISVILLE, KY.

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Made Of Steel — Cannot Break

For years this Box has been recognized as being first in quality and improvements, and the new **Steel Bottom Plates with Angular Serratures** to prevent the work from slipping add still more to its convenience and attractiveness.



Write for new **Circular C** describing this and many other features

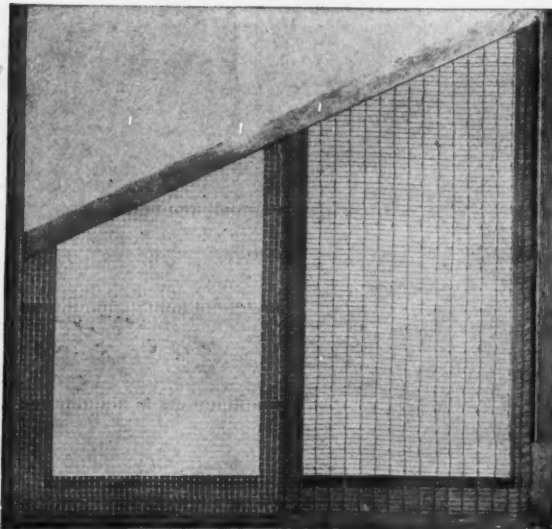
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Mfg. Co.**
Greenfield, Mass.

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The Secret of the durability of the woven wire lathing is embedded in the mortar, and thus secured from the corrosive action of the atmosphere; and also to the fact that rust will not attack the smooth round wire as it does the thin cut edges of a metal fabric.

"Why not use the proper kind of lath that lasts?"

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Grimm's Galvanized Corrugated Wire Lathing

"Patent applied for"

Greening's Patent Trussed Steel Wire Lathing

BUFFALO WIRE WORKS CO.,
(Formerly Scheeler's Sons)

BUFFALO,
N. Y.

Send Us Your Plans for Estimates —ORNAMENTAL IRON—

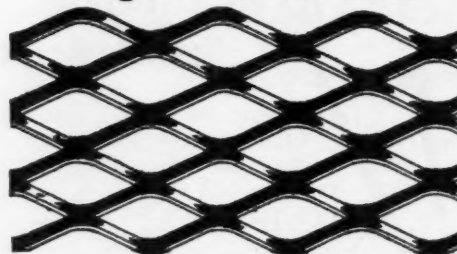


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Railings
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Etc.

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INTEREST YOU

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Berger's Metal Lath



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San Francisco

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Silentflow

A Noiseless Water Closet

IN THE TOILET
 Adjoining the sick room
 one of the distressing noises
 can be eliminated by installing the
 "Silentflow."

This closet was not put on the market
 until it was proven perfect in construction,
 design and workmanship.

**SPECIFY WOLFF H-7005
 FOR RESIDENTIAL USE**

L. WOLFF MANUFACTURING COMPANY
 Manufacturers of
Everything in the Plumbing Line
 The only complete line made by any one firm.

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**The Only Modern, Sanitary
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or locker, finished in snow-white, baked
 everlasting enamel, inside and out.
 Beautiful beveled mirror door. Nickel
 plate brass trimmings. Steel or glass
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Costs Less Than Wood
 Never warps, shrinks nor swells. Dust and
 vermin proof, easily cleaned.
 Should be in Every Bath Room. Four styles
 —four sizes. To recess in wall or to hang out-
 side. Send for illustrated circular.

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 Makers of Steel Furnaces Free Booklet

A HOT AIR FURNACE

For Less Than
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For 5 and 8 Room Dwellings

An Unheard of Price and
 a most Remarkable and
 Indestructible Furnace.

No Pipes No Lost Heat

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NORTHVILLE MICH.



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When in the market for
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**SAVE
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on every article, write for my
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 only house that sells first-class
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 prices direct. Shipments are
 promptly made from a very
 complete stock.

Small orders are as carefully
 handled as large ones.

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"BULL DOG" HOIST

a builders special hoist equipped with a
 Bull Dog Engine

3 Sizes:
 5, 6 and 8 H. P.



A specially strong piece of equipment
 for all single or double platform ele-
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 greatest variety of work. Equipped
 with the Bull Dog Engine which is sim-
 ple and easy to understand. Every en-
 gine guaranteed to develop
 ample power at all times.
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 sures complete freedom
 from engine trouble.
 Progressive Builders should
 write for Catalog 31 of
 up-to-date machinery and
 equipment. It is sent FREE.
**RATES & EDMONDS
 MOTOR CO.**
 Lansing - Michigan

This tool saves time and trouble.



It has been developed to help the man who must lay out and direct framing and stair work. It combines in one tool a square, bevel protractor, level, pitch-to-foot indicator, and steel rule. *It is the*

Starrett Builders Combination Tool

It consists of a stock 9 inches long through which slides a steel blade which is 18 inches or 24 inches long. The blade may be set in any position in the turret which revolves through an angle of 90°. No carpenter or builder should be without this valuable tool.

Price, 18 inch, \$6.00; 24 inch, \$7.00.

Starrett Tools may be bought in any good hardware store. Send for our free catalog No. 206 describing other tools for carpenters and builders.

Send for free booklet, "The Use of the Starrett Transit", which tells how builders and contractors can use our low-priced instrument on their work. Prices \$14.00 to \$28.00.

The L. S. STARRETT COMPANY, ATHOL, MASS.

World's Greatest Tool Makers

42-396



SARGENT

OUR new Rafter Square, No. 500R, is the most complete Square ever made for the carpenter.

It contains accurate measurements for all kinds of rafters, common, hip, valley, jack and cripple—in the most convenient form.

These measurements are all given on the Square; they are complete, correct and final. They save the trouble of multiplying and dividing and then obtaining a result about which there is some doubt.

Simple and easy to use. A great time saver.

For full description and directions for using send for the Sargent Square booklet, free on request.

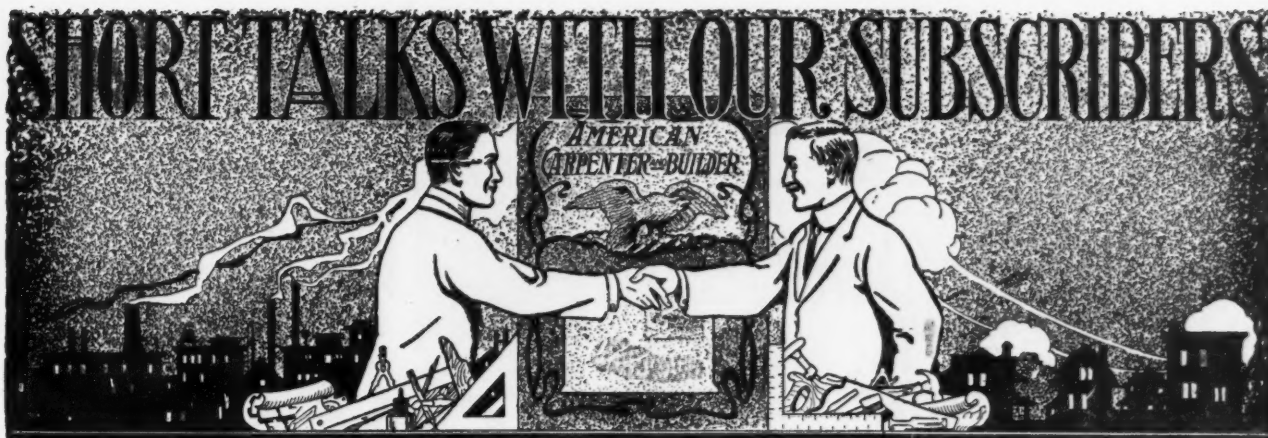
SARGENT & COMPANY

Makers of Squares, Planes and Mechanics' Tools

1149 Leonard St.

New York

Other Sargent Quality Tools are described in the Sargent Tool Book, a handbook for mechanics, sent on application.



A Hearty Christmas Greeting

AT this season of the year it is a pleasure to wish all of our good friends a very Merry Christmas. By Merry we do not mean hilarious, but rather thankful. This is written on the day before Thanksgiving, and thankfulness is in the air. It seems the really appropriate feeling for Christmas time as well.

These warlike times abroad are calculated to make us thankful for the land in which we dwell with its devotion to the arts of peace—its encouragement of peaceful industries.

We give every one of our readers a hearty Christmas Greeting. May your dearest ambitions be realized.

Better be a SPUG

SOME have laughed at the "spug" idea, but it is all right, just the same. This Society for the Promotion of Useful Gifts is on the right track. Why clutter up your friend's house, and, in turn, have them clutter up yours, with a lot of tawdry and useless junk—just because it is Christmas and the stores offer the stuff for sale? No one benefits by it except the store keeper; and it doesn't really work out to his best advantage, either. A few really useful gifts are appreciated much more.

Tools Most Useful and Best Appreciated Gifts

FOR carpenters or other mechanics tools make the best gifts. Quality here comes first. A cheap tool is an abomination at any time; but when offered as a present is an insult

as well. Every true workman loves a good tool. Every one, we'll wager, has some pet desire to own some particular tool or outfit—it may be something a little extravagant or outside the regular requirements of his daily work. That tool or outfit, whatever it is, will make the most appreciated Christmas gift one could offer.

If you have a boy who is following along in his father's steps, a thorough-going building craftsman, question around a little about this pet tool business; and then you will know how to make him happy.

Play Santa to Yourself

IN planning for new and improved carpenters' tools for the others, don't forget yourself. It seems like tough luck that we are forever giving away to others the gifts we really want ourselves! You might fool the family for once by offering to pick out your own present this year!

Look through our advertising pages this month and you will see a number of seasonable offerings that will interest you. Many consider books the best of all Christmas gifts. Certainly for builders there is nothing more useful or more interesting than a good book covering some phase of the building or architectural business. Christmas coming right in the midst of the long winter evening study and reading season makes books all the more appropriate.

With sincerest greetings and best wishes,

Editor AMERICAN CARPENTER AND BUILDER.

Contents for December, 1914

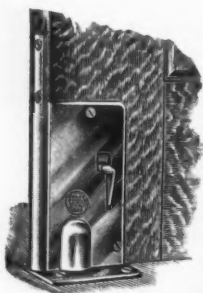
Page	Page	Page
Additional Details of Interior Finish for Brick and Stucco Residence..... 53	Gambrel Roof Construction..... 76	Problem to Solve..... 77
Always be Making Something—Money in Knick-Knacks 47	Gambrel Roof Framing..... 62	Questions for Slate Roofers..... 74
Alderson Way, The..... 40	Hardware and the Home..... 64	Raising Barn Rafters..... 79
Arrangement of Hall Switches..... 75	Helping the Carpenter..... 78	Reaching Out After New Jobs..... 38
Beautiful Four-Room Bungalow..... 49	Helps to Bigger Business..... 38	Right Angle Doors 66
Builders' Hardware 64	How Builders Make Money "On the Side" 43	Setting Gable Brackets; Verge and Frieze Boards for a Bungalow Cornice..... 63
Builders' Wife Writes of His Successful Winter Work Methods..... 45	How I do Tiffany Work..... 41	Shingled Bungalow Containing Four Rooms 57
Bulletin Board 94	How to Understand a Building Plan... 50	Simple Diagram for Cutting Rafters.... 77
Cleero School 72	"I Was Not Paid to Do That"..... 37	Simple Fink Truss..... 68
Cistern Filter 77	Joining One Pitch to Another..... 75	Sound-Proofing a Wall..... 76
Cistern Water for Drinking..... 74	Kink to Unravel..... 78	Steel Square 62
Combination Woodworker Keeps Busy... 46	Locking Garage Doors..... 66	Study the New Ideas..... 48
Come on in, the Subscribing Is Fine... 74	Makes Furniture and Specialties..... 47	Terra Cotta for Bank Buildings..... 71
Commercial Rating for Builders..... 43	"Man from the Lumber Yard"..... 42	To Keep the Dollars Coming in During the Winter Months..... 45
Cottage House of Bungalow Design..... 54	Modern Church Design..... 73	Two Elevators in One Shaft..... 65
Correspondence 74	Moisture in Air..... 76	Two Good Colonnade Designs..... 79
Cutting Up Tables..... 67	Mortar on Pressed Brickwork..... 74	\$2,000 Country School..... 78
Details of Interior Finish for Brick and Stucco Residence 52	Motor Car Is House-Mover's Friend... 41	Trade Notes and Items of Interest.... 80
Dining Room Interior (Full Page Plate) 58	My Profitable Winter of Study..... 46	Tree "Surgery" for Carpenters..... 46
Economics of Home Building..... 59	No "Spare Time" for Farmer-Carpenter 46	Up-to-Date Brick and Stucco House... 50
Exterior Details of Construction of Brick Residence 51	Noon-Hour Talks by the Boss Carpenter 68	Wants to Clean Marble..... 77
Extra Pretty Eight-Room Bungalow... 55	Odds and Ends to Help the Winter Income 46	Weights in Window Frames..... 74
Extra Profits 43	Odd Stair Work..... 67	Western Style Four-Room Bungalow... 56
Extra Profits in Typewriters..... 43	Placing Hot Water Heating Pipes..... 77	Wide Shelf Won't Warp..... 67
Framing Roof for Round Barn..... 75	Prizes for Letters About Extra Profits.. 44	Yours for Safer Building..... 68

CHICAGO

SPRING BUTTS

REPUTATION

Do you specify a spring hinge with distinctive features which will appeal to your client and assure satisfaction to all concerned?



Chicago "Relax" Spring Hinges

are in great demand. They are substantial in construction and readily applied. The EXCLUSIVE FEATURE of spring action release, allowing the door to be placed at any desired position and automatically re-engaging when the door is closed,

is of recognized merit and utility.

Send for Catalogue C 29. It fully illustrates and describes the most complete line of Spring Hinges manufactured.

Chicago Spring Butt Company

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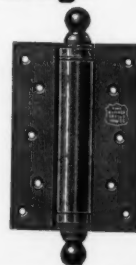


NEW YORK

Yes! the World does Move!
Facts are Stubborn Things



Don't Buy
SPRING HINGES
OF
OBSOLETE
CONSTRUCTION
ONLY



BOMMER

Double Acting Spring Butt Hinges

have the weight-supporting bearings correctly located to liberate the action of the springs, reducing breakage and increasing spring power, preventing unequal wear of the barrels, and giving practically unlimited durability. Bommer double-acting spring hinges open alike at both casings and both doors when both doors are opened.

The carpenter can avoid guesswork and save time when hanging double-acting doors in pairs, as he can scribe and fit both doors of a pair from the same side of the opening.

YOUR HARDWARE MERCHANT CAN SUPPLY THEM
Bommer Bros., Manufacturers Brooklyn, N.Y.

Cabot's Sheathing and Deadening Quilt



The Cold-proof, Heat-proof, Sound-proof and Fire-retarding Lining

"Quilt" is a matting filled with dead air spaces, and one layer is as warm as twenty-eight layers of common building paper. A house lined with it will always be warm and save coal. Floors and partitions lined with it will stop the passage of sound. Roofs lined with it will keep cool

in summer and prevent heat from escaping in winter. It will save coal enough to pay for itself every two winters as long as the house stands.

Send for a sample and catalog.

SAMUEL CABOT, Inc., Manufacturing Chemists, Boston
24 W. Kinzie St., Chicago - 1133 Broadway, N. Y.

Cabot's Creosote Shingle Stains; Stucco and Brick Stains, Conserve Wood Preservative.

STANDARD

for 30 years

MORRILL Saw Set



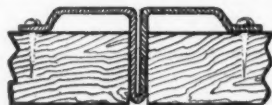
The Morrill Special Saw Set accurately sets any hand saw; takes out the wrong and puts in the right set at one operation. Send for Free Booklet: "Saw Points."

CHAS. MORRILL, 98 Lafayette Street
NEW YORK

METALLIC BATTEN STRIPS

PRACTICAL—EVERLASTING—ECONOMICAL

These Batten Strips of Galvanized Metal will never warp, split, or draw away from the boards. Offer no obstruction to sliding doors. Allow for expansion and contraction of the siding. Made in 8-foot and 10-foot length with interlocking joint. Easily cut; no waste. Nailed directly to siding with small nails.



End view showing joint closed. A perfect fitting Batten at all times, in all weathers. Beautifies any building.



End view showing joint open. Provides for expansion or contraction of the siding so nails will not work loose.

Metallic Batten Strips make strong, neat joints. They make the building wind-proof, weather-proof and rat-proof. Also valuable for lining grain bins or wagon boxes.

Write for Free Sample and see for Yourself

METALLIC BATTEN COMPANY

Owensville, Indiana

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The
**World's Greatest
Building Paper**

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The
**World's Greatest
Building Paper**

American Carpenter and Builder

Entered as second-class matter July 1, 1905, at the postoffice at Chicago, Ill., under the act of Congress of March 3, 1879.

Published on the first day of each month by

AMERICAN CARPENTER AND BUILDER COMPANY
RADFORD BUILDING, 1827 PRAIRIE AVE., CHICAGO

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ADVERTISING RATES

Furnished on application. Advertisements, to insure insertion should reach our Chicago office not later than the 20th of the month preceding date of publication.

PROTECTION FOR OUR READERS

The publishers of the American Carpenter and Builder will not knowingly publish any advertisement of a misleading character nor accept advertising from any individual, firm or company whose business methods are open to question.

We often receive inquiries from readers who desire information about concerns that formerly used the advertising pages of the American Carpenter and Builder, but are no longer doing so. They want to know if these former advertisers are still in business, if they can send them orders with the assurance that they will be filled, and a variety of other questions.

The American Carpenter and Builder will use every legitimate means to safeguard the interests of its readers and to protect them from fraudulent or unreliable concerns. Where the slightest doubt exists our readers should write the publishers for information. It may save them money, time and worry.

In all cases in writing to advertisers say: "I saw your advertisement in the American Carpenter and Builder."

VOL. XVIII

DECEMBER, 1914.

No. 3

"I Was Not Paid to Do That"

D ID you ever overhear one of your gang say that? Perhaps you can even remember of saying something that sounded much like it, yourself, sometime!

Well, it's human nature; but it's *not* the way to get ahead.

The Building field offers the most direct course upward to position and prosperity of any line of work. At every step the builder can see ahead to the next step above; and the opportunity is his to take that step any time he shows himself qualified for it. Moreover, the experience in one position is the foundation to the next position above.

Doing only what one is paid to do (or a trifle less) shoves a fellow back when the chance comes instead of pushing him ahead. Read what Frank A. Fall says about it in the Detroit Free Press.

FIFTY-DOLLAR-A-MONTH men are a drug on the market, while fifty-dollar-a-day men are not to be found anywhere.

Why is it? Why this great army of mediocre workers and this pitiful scarcity of men with energy, brains and initiative?

One reason is that the dollar-a-day worker is too fond of saying, "Aw, I wasn't paid to do that." He continually side-steps opportunities for advancement which come to him disguised as extra work.

"I was not paid to do that," he says, "and I'll not do it."

"Very well," says the employer, "two can play at that game. If you'll do only exactly what I pay you for, I'll pay you for exactly what you do, and not a cent more."

There is no future for such an employe in any business.

The wise worker sings a different song altogether.

"I may not be paid to do that," he says, "but if the boss will let me do it, I'll take the chance on getting the extra pay for it in due time. Meanwhile, I'll be learning something more about the business."

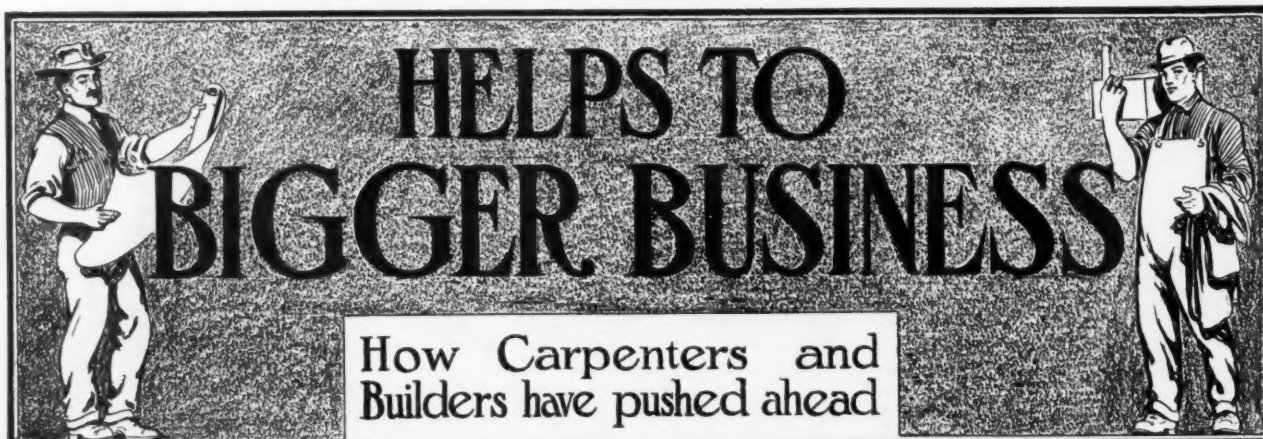
Watch for the workman who is so interested in his job, that he stays after hours to work out some scheme he has devised in connection with his work. He may not get pay for the overtime. But his work is bound to show the extra punch, and soon or late his pay envelope must respond.

When the plant gets too big for one man to manage there's going to be a new position looking for a man, and the overtime worker will have first call, without a doubt.

So it behooves every worker, in whatever post of responsibility, to study his work. Analyze it, puzzle over it, try to improve its methods and its results.

Every boss is looking for help from the worker who can devise a newer, better way of performing an old task; who can cut out extra motions and thus help to bring down the cost of production.

But no boss has any use for the worker who complains; who always lugs a grievance around with him; who bewails and bemoans and sheds gloom generally.



Reaching Out After New Jobs

THE STORY OF A CARPENTER AND BUILDER WHO ADVERTISED HIS CONSTRUCTION SERVICE—BUSINESS GETTING FROM LETTER AND CIRCULAR USED

By C. L. Chamberlin

Advertising Expert, Osseo, Mich.

DID you ever know of a carpenter and builder to advertise his calling? Possibly you have known of some one who ran a sort of card in the local paper. Another may have had little news items inserted mentioning his construction of "Mr. Jones' big barn" or "Henry Smith's modern farm home." Or an enterprising individual may write letters to men about to erect buildings of some sort. All this is foreign to my question. I mean, did you ever know of a carpenter and builder who used regular printed advertising, kept a mailing list, filed his "prospects" and followed them up with advertising matter just as the most enterprising sales agent or mail dealer?

I venture to answer for you that very few of you have known such a person.

But I knew this man, met him, listened to his plans, read his written data and from his notes wrote a series of advertising pieces which he used with immediate and pronounced success and a modification of which he still uses, although he has transferred his building operations to another country—South America.

One day in mid-winter, a chunky, smooth-faced, pleasant looking man came into my office and in a smooth, musical tenor voice asked for "the manager." I admitted my identity and soon we were discussing the object of his call.

Klark Alderson was a carpenter and builder of some training and experience. He had studied the theory of architecture and had worked under a carpenter of the old school erecting country houses, barns and other buildings. He had assisted on one church, some school-houses and a town hall. He could lay

out any building usually found in the country and smaller towns. He was by no means a city architect, just a good up-to-date carpenter and builder who recognized the great opening that exists for skilled, educated, experienced builders for town and country work of the usual sort.

He had directed a gang of four men, usually had plenty of work but was ambitious to do more. He believed that by advertising his work, he could widen his endeavors, employ more men, get better prices, lay out the various buildings, go from one to another inspecting and directing the more difficult parts and thus develop his personal work to a broader scope which would include all the more important construction work of two or three counties. He would train the men to his ideas and select bosses for each gang who would read his plans and under his directions lay out and build to the plans given. His own work would be limited to directing, inspecting, and perhaps remaining in certain places to oversee the building of difficult parts.

We Develop a Simple Sales Plan

I admitted the soundness of the plan and he began to outline his plans for getting business. To obviate unnecessary repetitions I shall go at once to the plans as they were completed, although we met and discussed them several times. He brought forward his knowledge of building and the demands of his calling among the people with whom he mingled and I united with this the knowledge of human nature and the method of appeal most effective in securing a hearing. The result was the completed method of solicitation which I now describe.



Klark Alderson, the Builder who Advertised for Business. (This Photo Appears on his "Circular".)

The first piece of advertising matter prepared was a letter. This was printed in the common imitation of typewriting, and started out with only the salutation, "Dear Sir." At the close there was a common closing phrase and Alderson signed each with a pen, giving them the appearance of being a personal, type-written communication. The body was an ordinary letter in close imitation of typewriting. It was sent to a mailing list formed of names of persons who were erecting new buildings of some kind. Names were obtained from the county newspapers, all of which Alderson received. His wife assisted by going over these papers and making clippings of every item mentioning any building or repair work.

The Soliciting Letter

The message of the letter was as follows:

DEAR SIR:

You are to do some building this season—so the word reaches me. And you will require the services of a competent builder to handle the job.

As an experienced carpenter and builder I write asking that I may be permitted to explain the construction I furnish. It may cover anything from a single item of labor to the completion of the entire job, including both material and labor. Nothing is too small to receive my careful attention, nor too large for us to undertake with a time limit for completion.

Of course I realize that before you are in position to talk over material or construction, estimates and costs with any one, you must have the work laid out, plans drawn and specifications listed.

If you have not yet had this plan-sheet prepared, I shall be pleased to draw it up for you—no charge—no obligations. All I ask is careful investigation of my claims and consideration of the bids I may enter.

My force of skilled artisans include carpenters, masons, tinner, decorators, and rough laborers. All have been trained to carry out my plans and directions under the leadership of experienced foremen.

From the turning of the first sod, to the last touch of the painter's brush there is not an item that my men cannot do and do well. Every difficult point is completed under my personal oversight.

Herewith I send you a little folder that describes some of the work I have laid out and my men performed. Select some of the jobs nearest you or most like the building you contemplate erecting. Go to them or to any others that you know I have handled. Examine them inside and out. Notice the close-fitting joints. Look carefully at the grade of timbers and other materials where I furnished them. Talk with the owners. Ask their opinions. **USE YOUR OWN GOOD JUDGMENT.**

The same painstaking, workmanlike construction service may be yours at a cost scarcely more than that charged for greatly inferior work and material.

You had better let me prepare your plan and specification sheet now. It will be handy to use in comparison with other buildings or for reference when you talk with other builders. Remember, it costs you nothing—leads to no obligations.

When can you and I get together for an hour or more to talk over the matter? Phone me—any line, my expense—or drop me a card, and I will meet you wherever you suggest.

Better glance through the folder, now, before laying it aside.

Very truly yours,

KLARK ALDERSON.

These letters paved the way and aroused interest

in "The Alderson Way," as he had styled his idea. At first he had some of the letters prepared without mention of the folder. They brought results and proved the excellence of the general plan. But Alderson wanted something more.

"When I meet a man and tell him my plans, but things do not move to the point of making out the plan-sheet, I want something to give him and he wants something to carry away for further consideration. He talks over what I told him with the family, but it is not definite, for his version loses the force of my argument. In short, I need something that my man can take home, read over, show the family, and consider until I see him or he sees me again. What I want is a circular or folder, and here is my idea of what to put into it."

The "idea" consisted of copy for a folder which needed but a small amount of reshaping to become the



A Typical Alderson Residence Job. (This Photo Appears on the "Circular".)

copy that went to the printer and became the thing he wanted. Believing that this folder will prove as valuable in a suggestive way for other builders as the letter already reproduced, I herewith append the copy of the folder. At first it was used as Alderson had stated, to follow an interview. Later, the effect became so pronounced that he mailed it with the letter to names of prospective builders, and the letter was then changed to include a reference to it. Whenever an interview preceded a letter, the folder was handed out as first intended. Of course the views could be omitted at a reduction of cost. But where is there a person who does not like to look at pictures, especially clear-cut, interesting half-tones? Alderson paid the extra charge for plates and used these pictures with which to brighten the pages of his folder and give it a greater interest for every member of the prospective builder's family. The folder was one of four pages, each about 8 by 11 inches, to fit a No. 9½ envelope. The letter formed a one-page sheet the same size. Both were well printed, but no pronounced display, colors or other adornments except the half-tone cuts.

Circular to Interest Prospective Builders

The following is the text of the folder:

The Alderson Way

Some Facts for Those Who Will Erect Dwellings, Barns, Churches, Schools, Stores or Other Buildings of Any Kind

The Idea

To offer construction service for those who build that may include every item of material and labor.

To enter bids for any separate part of building construction, or of construction and material or for the entire building, labor and material.

To draw up complete plans and specifications for every job and to stipulate the grade or quality of work and material and to enter into a bonded contract that this grade shall be maintained.

To make terms on construction that compare favorably with those of other bidders, and when the terms include both labor and material, to make prices



Alderson Lumber Comes From Where the Best Timbers Grow.

considerably below those of separate bidders on these items. To select all material and to perform all labor in a careful, painstaking, workmanlike manner that permits listing every job as a reference to new patrons in the future.

THIS IS THE ALDERSON WAY.

Klark Alderson, manager of The Alderson Plan of Construction Service, is fitted for his important position by study and experience. He has studied the mathematical and scientific foundation of the building art from the works of the greatest teachers in these lines. He has handled the cross-cut saw and cant-hook and has driven the logging team in the forests where choice timber is selected and cut. He has "done time" in mills and factories where raw material becomes the finished product and he has helped in the various processes.

Most of all, he has used the tools of the carpenter and builder and plied them under the guidance of master-builders for years before he became a master-builder himself. There is scarcely a type of building in town or country that Mr. Alderson has not helped to construct.

After much search and observation, Mr. Alderson has secured a force of experienced workmen for every feature of construction service, trained to carry out the Alderson idea under the direction of efficient foremen. Several gangs may work miles apart, but Mr. Alderson drew up working plans for all of them. He has been at the scene of operations many times and has laid out the work. The foremen of each gang makes frequent reports by phone, and if special difficulties are encountered, Mr. Alderson drives immediately to the spot in his auto, solves the problem and often remains to superintend in person until everything is again running smoothly under the regular foreman.

Regarding these foremen and their work, Mr. Alderson says: "I select my foremen from the most ambitious, energetic young men who have worked with me in the past. A few especially well prepared artisans came to me already trained to high-grade work. When drawing up plans for a prospective builder, I select the foreman best prepared to oversee that special kind of work. He and I go over every item. These foremen, working the year around with the men, know every effect of weather, food, time or location and are often able to take advantage of some local feature and thus lower expenses. These advantages we pass on to the builder.

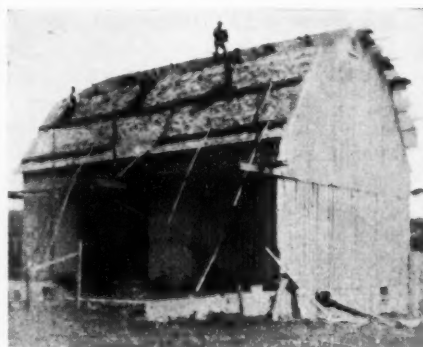
"No job is too small or too large. The smallest job receives our best efforts. The largest can get no more. We go any where and do any kind of work in the building line. I can always furnish both labor and materials at less cost than two separate bidders, because I do not charge two full profits, as they

do. By cutting a little on each item, I effect considerable reduction, yet am able to employ only high-grade workmen and make a suitable profit on the whole building.

I am always glad to advise builders on details of size, finish and other architectural features. Often a slight modification in details effects a decided reduction in cost. My buildings include every style of building art found in general use. Here is a view of a cottage which I planned and built for Henry Wilson, rural carrier in P——. I furnished everything in labor and material. Mr. Wilson says it cost him \$250 less than he and an old carpenter had estimated. Ask him about it.

"Here is a barn I put up for John Tyler on his farm two miles north of R——. It was a rush job, begun late and wanted ready for the season's hay crop. We built it under his time limit and beat it nine days. Mr. Tyler will be glad to tell you what he thinks of our work.

"The O—— township high school building was our work throughout. The committee intended to let the job in five separate bids, covering material, labor and finishing. Without authority, I put in a bid to cover everything. It was less than the sum of the four lowest they had and there was yet the decorating to add in, so they rejected them all and later made a private contract with us. We are proud of that building.



Barn Building is a Specialty with Alderson.

This completes the "Alderson Way" of securing building contracts. Alderson operated this plan for three years, sold out to two of his foremen and went to South America, where at last accounts he was engaged in a similar line of work for American exporters seeking trade with that continent by establishing branch houses or agencies. As he is no longer my client, I pass his plan on to others.

Forest Notes

Although there were an unusual number of forest fires on the national forests of Oregon and Washington this year, the loss of merchantable timber has been relatively small.

Uncle Sam's forest rangers require that permanent camp sites within the forest shall be kept in sanitary condition. The ubiquitous tin can must be buried and waste paper burned when a camp is left.



The Mills Where Alderson Lumber and Millwork are Manufactured.

Small jobs? Plenty of them. There is a fuel shed for the M. E. parsonage in R—. A poultry house for A. J. Mack, near R—. Summer kitchen for John Menning, four miles north of R—. Porch for J. Hasty, three miles south of P—. Porch on Baptist parsonage in P—. Steeple on Baptist church in P— rewired and re-decorated.

Other recent jobs are—
Dwelling, H. Pierce, in

R—. Dwelling for K. Rose, two miles west of R—. Dwelling, M. West in P—. Barn on Hasbrook Farm near P—. Barn, granary and garage, farm of J. Rogers near M—. School house, Dt. No. 3, N— Twp. School house, Dt. No. 7, N— Twp. Stock shed on Koos Bros. dairy farm, near M—. Lumber sheds—Nville. Store occupied by Laure & Co., in Nville. Town hall in Bford.

Space forbids naming more of our buildings and patrons. If you know of one where we were employed, we invite you to inspect it. Only be sure to ascertain just what we did on it, whether or not we furnished any material and what part of the construction is ours. We are willing to be judged by our products anywhere, but ask in all fairness that we be not condemned for what we are not responsible.

We earnestly solicit opportunity to meet prospective builders and discuss details of their building plans. We are always willing and pleased to draw up a complete plan-sheet without expense whether or not we are employed. We freely tender such service as well as our further counsel and advice with our compliments, asking only in return, as a personal favor that we be permitted to make estimates and enter bids on the building to be erected. I will gladly go anywhere to meet builders. All telephone lines are free to those wishing to make an appointment for such meeting. If you intend to build, may I not hear from you?

Very truly yours,

KLARK ALDERSON,

Both phones, Nville Central.

P. O. Nville, Mich.

Motor Car is House-Mover's Friend

A house-moving concern in Los Angeles makes steady use of a five-ton motor truck, and finds it a great advantage over the old-fashioned method, both for speed and economy. The motor car is heavily ballasted with sacks of sand to make traction for the driving wheels, and is connected to a length of steel cable by the rear axle. The cable is then passed

through a pulley and the other end is anchored to a tree or telegraph post about a thousand feet ahead. The pulley is secured to the heavy construction of timbers and wheels on which the house rests while taking its journey across town, and a steering apparatus like a wagon tongue is operated by two men. By this method, the house can be brought along the streets at a rate of three to four miles an hour and for transporting long distances, the motor truck is far superior to the devices in use heretofore.

C. L. EDHOLM.

✦

How I Do Tiffany Work

I see some of the brothers are interested in Tiffany glazing. I do not claim to be an expert in this class of work, but will give the way I do it and this is the method followed by most of the decorators in this city.

Glazing can be done on any kind of a wall, but no matter what kind of finish it is to be, keep your last coat a light cream and be sure to stipple the last coat and have it an egg-shell gloss rather than dead flat.

Make your glazing color out of three-quarter oil and one of turps with a little japan. Raw and burnt sienna, Prussian blue and chrome greens are the most popular glazing colors.

In this instance we will take raw sienna with just a touch of chrome yellow. Glaze over one side of the room, then have separate pots of burnt sienna, raw umber chrome green (light). Daub spots of these colors, spreading them out somewhat with your stippler. Then when the wall is in this condition, take a large brush and work the colors all together, using the brush up and down the wall.

Crumple a handful of cheese cloth, do not roll it, and stipple all over the wall. Some prefer the tipper, but in my opinion the cheese cloth gives the prettiest effect.

It is quite a trick to stipple a wall in this manner, but with practice you will soon learn it. When dry, coat with flat varnish.

After reading these directions it may seem easy, but Tiffany glazing requires considerable experience and no one should tackle a first-class job without it. The great trick is to get the right colors so that they harmonize with one another.—Wm. Kerr, in *Brush and Pail*.

✦

A surprisingly large number of substances, ranging all the way from the condensed fumes of smelters to the skimmed milk of creameries, have been tried or suggested as means of preserving wood from decay. Most of them, however, have been found to have little or no value for the purpose. Certain forms of coal-tar creosote and zinc chloride are the most widely used wood preservatives.



Motor Truck Moves Los Angeles Home at a 4 Mile Per Hour Clip.

"Lots of People Have Money to Spend—to Invest, if You Will Show Them How"

—THE MAN FROM THE LUMBER YARD

Many of our readers have shown an interest in the subject of Casualty Insurance that was presented in this department last month. Those who did not read it should do so. We want everyone to feel free to write us. We have a postage stamp to match against one that a reader may use in writing us.—EDITOR.

THE ten foolish virgins told of in the Good Book have the laugh on the contractor or builder that don't look ahead.

There is no reason why a builder should not be a salesman. A great many people want things, but they don't know it. They are waiting to be sold.

You can easily see improvements in buildings



The Contractor Outlines a Building Development Scheme to a Local Real Estater.

that could and should be made. You know if good houses to rent in your locality would make proper returns on the investment.

There is a Demand

Don't forget that we have over a million arrivals each year via Babyland, and that as soon as the European war is over the tide of emigration will turn to our shores as never before.

Remember that the wealth of this country was increased this year by more millions than you and I can conceive of. All this means more and better homes.

Lots of people have money to spend,—to invest,—if you will show them how.

You have often noticed the flat look of that house owned by Dr. Pills. Suppose you call on Mrs. Pills some afternoon. She will be pleased to look over your various sketches and plans. You can easily show her how wonderfully her home

would be improved at a small outlay by placing a porch in front of her home.

New Conditions Make New Demands

You have noticed that since the new factory came to town there was not an empty house. You know that Mr. Lots, the real estate man, owns two acres of ground near the factory.

After you have figured out the cost of improving these two acres and putting up cottages, you could show Mr. Lots handsome returns on his investment and thereby make a good, active customer. Don't wait for things to happen. Death and taxes are about the only things that come without a fight or an invitation.

When is the time to Start a Campaign for Business, or More Business? The Day After You Read this

Don't say, "There is no chance in my locality." If such is the case, get into a locality where there is a chance. Stagnation is as bad for man as for water. Invest in a package of 3 by 5-inch cards. Enter the name of every possible prospect on these cards and keep after each one until landed or you know it is a dead one. If you are responsible for keeping only your own two hands busy or have one or more employes the problem is the same. If you originate business and provide employment



The Contractor Puts on His Best Clothes and Calls on the Doctor's Wife with Remodeling Plans.

for other men, no one can say that you are not entitled to returns on your enterprise from the labor of the men you employ.

When I was a kid, about the lumber yard, conditions were not so complicated as they are today. The credit system was not so highly developed. It would have been unwise for a man to attempt the big enterprises that many now successfully accomplish.

Commercial Rating for Builders.

If a builder is to reach the maximum success in his sphere, he must (1) know his own limit, (2) plan for the greatest efficiency, (3) own his material right, (4) know how to collect promptly. I believe that the lacking of a credit rating costs many of our readers big money every year. Of course, when you go into Bill's store and ask Bill to give you some material and to book it, you get it because Bill "has your number." He knows how good pay you are, and knows more about you than the mercantile agency ever could.

However, with a proper letterhead and a rating in the mercantile books, there would be opened up many other sources of supplies to your profit.

Without this rating, an inquiry addressed to wholesaler or jobber would probably receive only a pleasant reply. You know that you bid lower when there are many bidders.

If your local dealer knows that you can buy in other markets, he is not likely to place a too heavy percentage of profit on the goods you buy of him.

The most valuable business asset a man can have is the confidence of the people he deals with. Many who read this do not care for a rating, others already have a good mercantile standing.

If you do not have a mercantile rating and want one, write me, stating (a) how long you have been in business, (b) your present resources and liabilities, (c) your principal line of work or goods or manufacture. Your letter will be held as personal and all possible assistance will be given you.

Never refuse to give all desired information to an agency reporter. It is well to have his friendship.

Many failures in business are traceable to poor collectors.

It will be very appropriate to talk about collections in my January letter.

Yours for bigger things,

THE MAN FROM THE LUMBER YARD.



I knew a plumber that started in business and bought a delivery wagon from a lumber company. He did his own lettering—that is, he changed it thus:

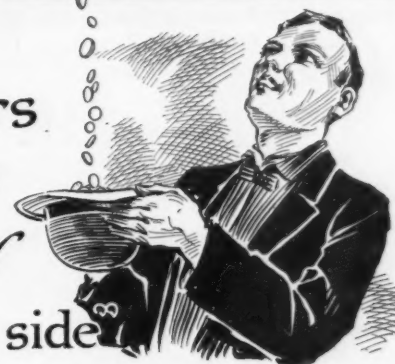
P L U M B E R

Put a "P" to lumber, made plumber.

—WM. C. JASBURY.

Extra Profits

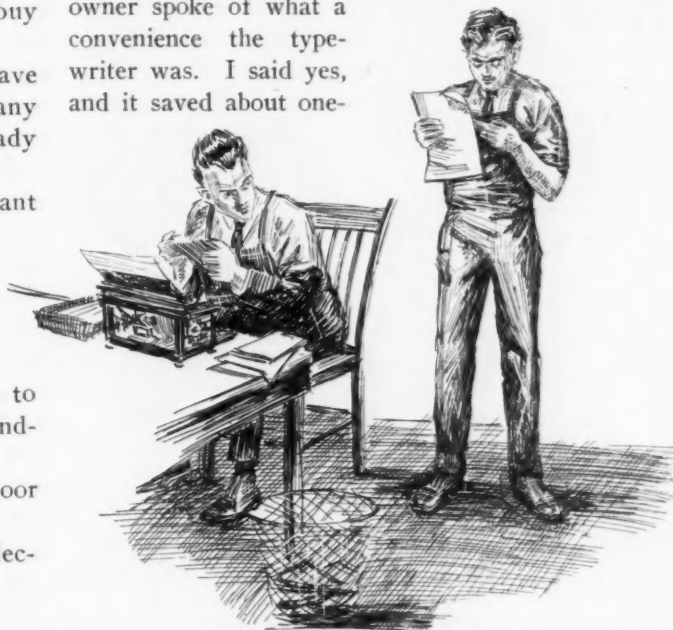
How
Builders
make
Money
"On the side"



PRIZE LETTER: Extra Profits in Typewriters
Extra Profits Editor, _____, Calif.

AMERICAN CARPENTER AND BUILDER:

When I started contracting I owned a typewriter and put it in as part of the firm capital (most of the rest being in our heads). We got the first job figured, a \$2,400 bungalow, and when it was finished the owner told us we got the job principally because our specifications were typed, and he could not read the other fellow's. (Everybody wrote his own specifications in that little old-fashioned place at that time. And generally speaking, the cheapest man got the job). The owner spoke of what a convenience the typewriter was. I said yes, and it saved about one-



"By Jove"! A Typewriter Would be a Big Help in Getting Out My Monthly Statements."

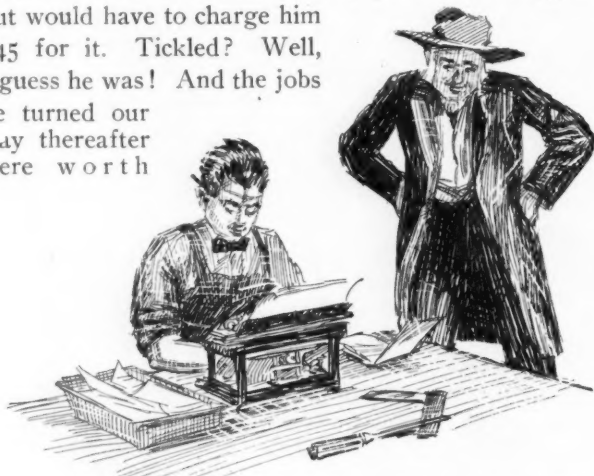
third to one-half my time in doing what writing we had to do. He was surprised to learn of such a saving in time. "By Jove! It would be a big help in getting out my monthly reports, wouldn't it?" Partner spoke. "Better let us sell you one, Mr. Blank. We can sell you a good machine." "Well, I don't feel like putting a hun-

dred dollars into a typewriter just now." "We can let you have a first class machine for \$35."

I looked at Partner in amazement. "You can?" exclaimed Mr. Blank. "When?" "Tomorrow morning," Partner replied. "Say, will you let me try it for a few days?" "Sure."

Well, he bought it and we made \$10 on the deal. A friend had been trying to sell his machine to Partner for some time and had offered it for \$25. Partner saw Opportunity coming our way and he grabbed it.

A few weeks after this I was in a neighboring city and, quite by accident, got in touch with a Second Hand and Rebuilt Typewriter firm. Sitting in a real estate broker's office the next day, I offered my services to repair his machine which had gone slightly wrong. It was an old, wornout machine, of an obsolete make, but he had taken a fancy to it and remarked that he would give \$75 for a new one of the same make. I took him up. He was rather surprised, but stuck to his bargain. I had seen one in the city. They were offering it for \$25 on account of its being obsolete. But it was in first-class condition. When I delivered it I told him I could not stick to my part of the bargain, but would have to charge him \$45 for it. Tickled? Well, I guess he was! And the jobs he turned our way thereafter were worth



"The Contract Will be Ready in about Ten Minutes, if You Can Wait that Long"

many a dollar to us. Then we got the agency for a very small, sort of "pocket edition" machine. One day I took it to show to a prospective customer. When I returned to the job I put it in my tool box and forgot to take it home that night. Next morning about ten-thirty Partner suddenly remembered that he had forgotten to order some hardware from the city. Home was nearly a mile away, the train was due in twenty minutes and the postoffice was only two blocks. I got out the little

Prizes for Letters About EXTRA PROFITS

For the best letter each month we will pay \$10.00 (in goods selected from our advertising pages); also \$1.00 (in advertised goods) for every other letter published.

Study through our advertising pages and note the variety of interesting offers for carpenters and builders to act as local agents. There seems to be good opportunities for profits in connection with each of the following:

Dumbwaiters	Metal Ceilings	Door and Window
Store Fronts	Metal Shingles	Screens
Ventilators	Weatherstrips	Lighting Systems
Skylights	Wood Mantels	Lightning Rods
Silos	Wall Board	Detachable Hinges
Furnaces	Floor Finishing	Keyless Locks
Bathroom Outfits	Steel Roofing	Shingler's Chairs
Vacuum Cleaners	Waterproofing	Clothes Driers
Coal Chutes	Gliding Casters	Popecorn Machines

We would like to hear from builders who have had experience in handling any of these. Your advice and encouragement may be worth many dollars to other builders. Address EXTRA PROFITS Editor, AMERICAN CARPENTER AND BUILDER, Chicago.

machine and some paper from the pad I always keep in my chest. Partner took it to the office and mailed it in plenty of time.

Meantime the boys had been having a lot of fun out of the fact that we carried our office in our tool chests. All sorts of remarks were passed. But one man was very much interested in the little "writer." Finally he asked what they cost, and when I told him less than a week's wages, he said: "Say, give me that little machine and keep my wages Saturday, will you?" To which I readily agreed. And then I went to work and built a little compartment in my chest for one of those typewriters and kept one

there ever after, as long as we held the agency.

But that was a lucky day. Before noon, a gentleman came up to see us about a garage. Partner and I sketched out a little plan, and wrote up the specifications necessary to embody some cranky notions of his own. When it was fixed up to suit him, he said: "When can you have the contract ready? I don't want to rush you, but I have to go up the country tomorrow morning and will not be back for about three weeks. And I'd like to have you at work on it before that time." Partner had the typewriter out by that time and told him the contract would be ready in about ten minutes, if he could wait that long. He never said a word to interrupt the rapid clickety-click of the typewriter, just looked on with his mouth open. Thinks I to myself, here is a "prospective." Partner handed him the neatly typed page and his fountain pen. "By jiminy crickets! You fellows do take the cake." He read it and signed his name. We signed ours. "SAY!" he said suddenly, "What will you take for that watch charm anyway? I want it to make out my orders with." He was a salesman of some kind. When we told him the price he hauled out his check book.

It was two months before we sold another. Working five miles from town we got out the machine and wrote some business letters during the noon hour. The old farmer watched with much interest. When I finished he asked if I would make a couple of lists for him. Of course I did it. Then sold him one!

And so the game went on. Sometimes we sold none for two or three months at a stretch. And once in awhile we sold a couple in one month. But all in all, it averaged up a tidy little sum on the side. But neither Partner nor I had the nerve to go out during idle months and deliberately solicit. GET THERE.

(Name and address withheld by request.—Editor.)

To keep the coming in during the winter months

PRIZE LETTER: A Builder's Wife Writes of His Successful Winter Work Methods

Winter Work Editor: Donnellson, Iowa.

WINTER work sounds good! and it means something, especially to "us women." First, we know that then is the time we need money, and second, when the "Old Man" sits around the house all day doing nothing, he is particularly grouchy. (This includes wash-day, which is not very agreeable to us and tends to put ambition to sleep altogether.)

Thank goodness, I haven't much bother with Frank in that respect, as he usually manages to find something to keep him busy and out of mischief, for after all, these men are but boys, and Oh, how noisy—Oh, well, this might do for a mother's magazine, but "money" is the subject now.

Frank does a great deal of drawing. When we first started out together he would only draw up plans and specifications for the work he did himself, but he soon discovered that there were many workmen who were willing to follow his plans and specifications—yes, even some competitors were willing to do so. This not only increased his winter work but was one of the best advertisements that he could wish for. Of course, one cannot draw every blessed minute of the day, so he finds time to do lots of extra work.

Now, there are tricks to all trades; some are honest and some are not. You can charm a \$300.00 Grandpa's Clock out of a bridge plank, but you can't sell it to an old miser who has one of the old out-lived traps in his attic. No! But make him a three-legged stool and tell him it's just as serviceable as a four-legged one, yet cheaper, and you have sold it. An honest trick is worth learning.

When you can go to a retail lumber dealer and buy the same sized screen for from 25c to \$2.00, you know that you have a problem as well as the dealer to compete with in order to put butter on your bread when the pastures are covered with snow.

Frank says the mills buy direct all material in the bulk, by the bushel, barrel, carload or the factory's whole output, while we buy it by the handful and pay with our whole "Intake," so after letting all the air escape he did this. He took to the labor saving scheme. We have a small power woodworker, saw mandrel

and planer or jointer. He took two saws of the same size, spaced them with bevel washers so that they sit about $\frac{3}{8}$ of an inch wide, leaving the same space between, all depending on the thickness of the stuff to be used. He set the saw table to the depth of the width of stile to be received and ran out the top and the bottom stiles of the screen. Then he changed the side stiles to match the first. In this way any good man can make screens that will surprise a planing mill. Frank always tries to arrange to leave the last houses of the season unscreened and then make them when outside work is impossible.

We were visiting with a family whose mistress did a great deal of sewing. This lady had a beautiful plate mirror about 32 by 72, but she explained that it was such a trouble to handle on account of its weight, and that after a dozen or more attempts she finally located a studding, and there it hung, beautiful but inconvenient. Well, Frank "took the stand" and suggested a sort of stand—a square panel back with the mirror hung about 6 inches above the floor, clothes hooks on each side, and at the bottom on each side of the mirror an arrangement of drawers, altogether about 18 inches high with table top on which were to be placed small mirrors on adjustable rods, and the whole thing mounted on strong castors. Well, the lady took him up and he made it, and then some—for a woman can advertise.

When we were first married I asked Frank how he was able to think of and find these ideas. He answered, "Oh, I'm interested." Well, if that is all, it would ease many a man's drudgery if he would just get interested.

It was just last Fall that we were visiting with the Newlyweds, and Mrs. Newlywed made a typical feminine complaint about their neighbor's back yard—the mess. Everything upside down. Especially an old bedstead leaning in a lazy attitude against the barn, half way out in the alley, received such compliments that, had it been able to understand, its ash-gray weatherbeaten sides would have turned black and blue for shame of its owners. Well, in due time Frank had the old thing in his shop; but a last degree optimist

would have had a problem to see a bright future for it. Yet again in due time, the former bedstead owners were the possessors of a beautiful mission clock, little dreaming that the object of their pride was part of the old bedstead.

But, best of all, when those Newlyweds forgot disorderly back yards over the joys of the arrival of an 8-pound male, "Just the sweetest," Frank called the attention of the young father to a cute little bed that had been made out of the rest of the old bedstead. Well, the young father owns it now.

I remember one time a lady asked Frank if he could put a handle on her rolling pin. Well, to tell the truth, it nearly "got my pride," but Frank seemed to take as much interest in that rolling pin as he would

in a public school plan. The consequences were that the rolling pin brought a sink to be made, the sink brought a cabinet, which finally led to larger work, so it seems to pay. Take everything you can, no matter how small; take it with a smile; be serious in thought and jolly in appearance, always. Not only to prospective customers, but everybody, everywhere.

Just listen next Spring to the expressions—If I had known, I would have finished my attic last winter; furnished my bath with modern conveniences (especially in the country); installed a furnace; refinished my floors; built in a cabinet; modern wardrobe, and a thousand other things to keep you busy if you get after the work.

FRANK'S WIFE.

(Name withheld by request.—EDITOR.)

Odds and Ends to Help the Winter Income

Profit-Making Methods Worked Out Successfully by Other Builders

My Profitable Winter of Study

Winter Work Editor:

Des Moines, Iowa.

The first year that I worked at the carpenter trade I was laid off when the cold weather set in and work became slack. In talking to some older men about the work I found that perhaps if I studied I could understand the work better. So I went to the Public Library and took out books during the winter, which I read at night, as I had work during most of the winter.

In the spring I went back to work and was surprised at the help my study had been to me. When the next winter came I was not laid off, but was kept at work. This, however, did not put a stop to my studying. I began to take more trade papers and also a course in building. Ever since that first winter I have not been sorry for the study I put in, because the times I have been out of work since then have been few.

So, Brother, if you want to use your spare time to advantage do it by studying. It will do you lots of good, and I am sure you will never regret it. I know I haven't.

G. E. JARVIS.



Combination Woodworker Keeps Busy

Winter Work Editor:

Rimbey, Alta., Can.

I am looking after a lumber yard besides contracting and building. During the winter months I work in the shop, in which I have a combination woodworking machines with which I make all kinds of moulding and window frames of standard size. I also make quite a lot of furniture, which I find has a ready sale around here, as this is a newly settled part of the country.

So, with the care of the lumber yard and the shop work, I find that I pass the winter months away quite profitably.

C. J. HEWITT.



Tree "Surgery" for Carpenters

Winter Work Editor:

Bement, Ill.

Verily, I say, the carpenter must be a versatile customer. He sweats in the summer and then sweats some more trying to keep busy in the winter.

I have worked at the harvest trade, have bought and picked poultry, worked as lineman and one winter on a bridge gang, and have found all to be good providers for winter work.

Three months at either will not hurt your "knack," but will make you appreciate your trade better.

The last two years I have depended on some winter work and have filled in spare time remodeling, doing odd jobs of repairing and a little tree trimming. I have been studying tree trimming and expect to do more in the future. A little study and experience will make any carpenter competent to care for trees and shrubbery, most of which is done before the carpenter appears for the summer.

If you have a vacant spot of ground plant it into a garden, care for it right, and let nature store up its fruits for you to use when your salary is reduced.

L. S. PROCTOR.



No "Spare Time" for Farmer—Carpenter

Winter Work Editor:

Omena, Mich.

Four or five years ago my wife and I left Chicago and came to a small country town and bought ten acres of land with no roads or buildings or anything on it. First I built two rooms during my spare time, but now we have a five-room bungalow, a nice cellar, a large porch and a small barn. I am planning on building a larger barn and silo next year. Later we bought eighteen acres, chiefly woods. During the winter I chop wood to clear the land, tend to cows, horses, pigs, chickens, etc. I work at the carpenter trade during the summer months, but we never worry about lack of work or how we are to put in our spare time, for I always need more time than I have for all there is to do.

We hire our ground ploughed and put in shape for planting, but we do most of the rest, except perhaps during a week or so of the busy season, when we have a man to help. Of course, in summer it keeps us hustling early and late, but we are very comfortable and doing nicely. When one has a home of his own and some stock, it is not a question of how to put in spare time, but how to get spare time to put in.

JOHN PATRICK.

The propellers of aeroplanes such as are used in the present European war may be made of selected ash, which is both strong and light and will not split under vibration or shock, or of built-up layers of spruce with mahogany centers. The framework of the machines, too, is generally made of wood, spruce being much used on account of its straight grain and freedom from hidden defects.

PRIZE LETTER: Makes Furniture and Specialties

By Orland Moore
Contractor and Builder

Winter Work Editor: Hornersville, Mo.

How can I turn my spare time into profit during the winter season? That is one of the many things that bothered me until I began to study the AMERICAN CARPENTER AND BUILDER and also "Radford's Encyclopedia of Construction." I think that time is well spent studying either; but some, like myself, cannot afford to devote all of their time to study, so they can take Vol. XI, "Shop Work and Manual Training," and find a nice assortment of porch and lawn furniture that can be made and which find ready sale when the Spring season opens. I also find that a few iceboxes find ready sale at a good profit. Another nice thing that I expect to work at during my spare time this winter is an ironing cabinet of my own design, patent pending, which finds ready sale at a good profit in winter as well as summer. Another nice thing that almost any carpenter can do is to make a few Morris and rocking chairs.

I remember once a friend of mine took a bunch of left-overs from other jobs and made three Morris chairs and one rocker in his spare time during the winter, while a great many others were loafing and some of them making fun of him for wasting his time that way. He made \$31.50, which he told me paid for his otherwise wasted material and gave him wages and a small profit besides.

About two years ago I made my aunt a wardrobe and gave it to her as a birthday present. As a result I had orders for four others within a week, which I made when it was so cold that I could not work out of doors. I made good wages and it was nice work besides.

I think that we carpenters are too backward about trying to help each other along this line. I am always glad to hear of others' success, and would like to hear

from as many as possible through the AMERICAN CARPENTER AND BUILDER. When I obtain my patent on the ironing cabinet I will furnish a photograph to the AMERICAN CARPENTER AND BUILDER, so it may come out if they care to print it.

Here is wishing success to all of the Brother Carpenters and also to the AMERICAN CARPENTER AND BUILDER.

ORLAND MOORE,
Contractor and Builder.



PRIZE LETTER: Always Be Making Something—Money in Knic-Knacs

By H. J. Blacklidge

Winter Work Editor: San Rafael, Cal.

Along about the tenth of October there came a rainy day and our boss had no inside work on hand. I read all forenoon, but after dinner went out in the shop at the back of the lot. I picked up three blocks of waste stuff and sat there about ten minutes fooling with them, laying them together first one way and then another until suddenly I saw a candle holder staring at me. In twenty minutes I had cut it out and glued it together. Then I took it in and asked The Lassie what she thought of it. She has pretty good judgment on "sich like." Well, when I got her thoughts I went back and made five more, and stained them. Next day it rained some more and I waxed them.

Then I took them up to the Art Shop and proposed to the proprietor that he sell them at a reasonable figure, but that I wanted forty cents apiece. He looked at them and said, "I can sell them in three days. Five times forty is two dollars. Here you are. What else can you make?" "Anything," I promptly replied, "What do you want?"

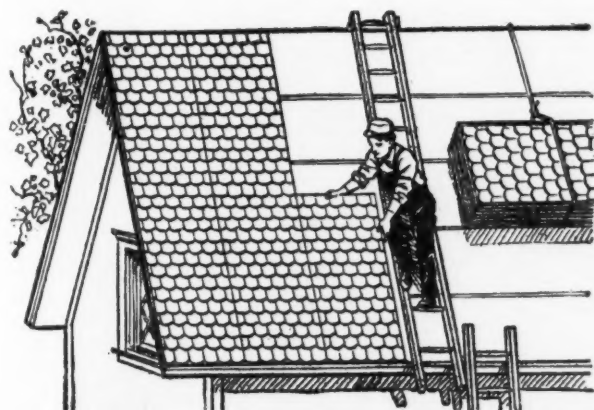
As a result of that little conversation I went home and gathered up all the scraps I could find and started in earnest. I made a lot of "artcraft" frames, some wall hangers, smoker's sets, taborettes, stools, flower pot stands, calendars, and so forth. When fair weather

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Hornersville, Mo.,

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came again I was so busy that I kept right on working in my own shop till Christmas.

But not all my time was spent on these *little* articles. People asked the art dealer where he got the little things, and he told them. Then first thing I knew they were coming to me to get more pretentious things made. I made a sewing cabinet for a fellow to give his sister. A young couple wanted a small rocking chair for their little girl. Whenever anyone mentioned wanting anything in my line the art dealer promptly gave them my address and recommended that they come and see me. Wish I had had that design for a medicine cabinet given in the September number of the A. C. & B. That is a beauty and I think I could have sold about six of them.

Always a Sale for Well-Made Articles

This business kept up until Christmas. After the holidays the bottom dropped clean out of it. But what I want to impress on the Brother Chips is this: *Never stay idle.* Always be making something, or at least *doing* something. Along in the fall, when you have any spare time, make a picture frame or a book rack or postcard holder, or any little piece of craft work you can think of. Then about the month of November make arrangements to place them in some window where they will show up nicely, and have the proprietor sell them on commission or buy them outright from you. If people are anything at all like they are in this part of the country, you will not have any trouble in disposing of a nice bunch of things.

Don't make the mistake of making a lot of the same articles. Make a number of different articles, then you won't have much of anything left on hand. The first winter I tried this my frames did not go at all well. But I had to make over forty candle holders. They were of seven or eight different finishes and about as many designs. But the following year I tried it again and sold *three*. But the frames sold *well* that year. So you see you have to sort of try it out till you find what people want. But sure I don't think any of you need to be idle much up to the holidays. Of course after that—well, that is another story. But this is one of the ways I used TO KEEP THE KOIN KOMING IN.

H. J. BLACKLIDGE.



PRIZE LETTER: Study the New Ideas

By Jens C. Jensen

Winter Book Editor:

Bedford, Mass.

If you are a young man and working for contractors—no matter how smart you may be or how good a mechanic—*some* day you are liable to be laid off. Do you dread that day? You do not have to if you are using your summer right. Make your spare time profitable; study your business; read the trade journals; keep up with the new ideas; make suggestions.

You have friends, you go and see them Sundays, you go into their houses, their barns, their hencoops and

pastures; do you stop to look at these things from a carpenter's viewpoint?

Did you notice that awfully crooked ceiling in the kitchen when you visited your friend, the farmer? Did you mention that you had seen some ceilings worse than that one which had been made to look mighty good at a very small cost? Did you think of a new idea, and was your friend interested when you mentioned wall-board? Mine was; I am going to straighten up that ceiling of his some day when I am "laid off."

Also I am going to do something else for him. I had dinner with him and his family, his wife had some very pretty china and table-ware and I asked her where she kept it as I had not noticed it in the rooms. "In there," she answered, pointing to a dark closet hidden securely by an old fashioned four-panel door in front of the table. "Well, the Idea!" I exclaimed, "to have all these pretty things stored away where nobody can see them." "We have been thinking of buying a cabinet," she told me, "but the dining room is so small that there is really no place for it." "Except there," and I pointed again to the old closet, "Why don't you take off that old door and put on a nice glass-front and you would have the prettiest china-closet that you ever dreamt of besides a great improvement to your dining room." The result was that I am going to make that closet for her some day when I am "laid off."

You Will Find Most Farmers Interested in Cement Fence Posts

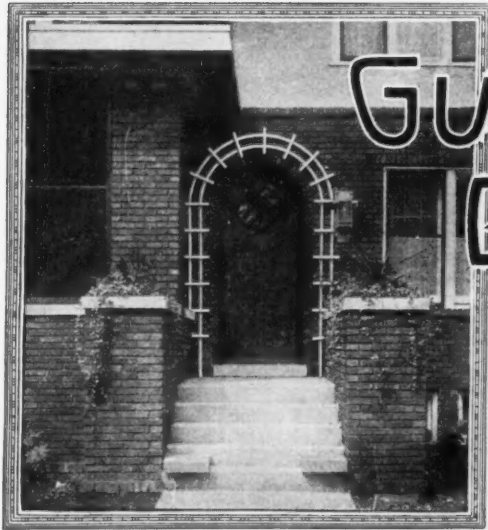
Farmers generally have fences along the roadside and around pastures; fence-posts will rot; do you think of that when you see one and suggest cement posts? You can make them; the AMERICAN CARPENTER AND BUILDER will tell you how if you do not know.

The farmer has chickens, perhaps he raises asparagus, also; chickens are great bug-destroyers in an asparagus field. Did you suggest a few portable chicken-coops to be made during the dull season, so as to have them ready when the chickens come out? They will pay for themselves the first season as the result will be better chickens and better asparagus.

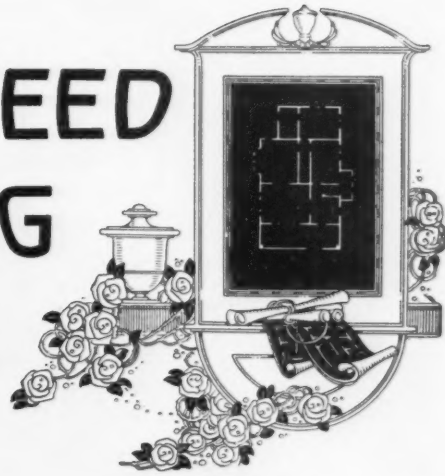
Also, your friend may want a small shed for crating his strawberries next summer; strawberry beds change location; why not suggest a portable one that can be taken in during the time when it is not needed and put up at the right spot the next year?

These are only a few of the many things a young carpenter should have his eyes open to. Are you aware of those little things, boys? If not, try to get on to them; it pays mighty well to have them to do during the dull season. And in your spare time study; read the building papers and the books published on the trade; study the new ideas; make suggestions, and you will soon find a lot of little odd jobs waiting for you to be "laid off."

JENS C. JENSEN.



GUARANTEED BUILDING PLANS



Beautiful Four-Room Bungalow

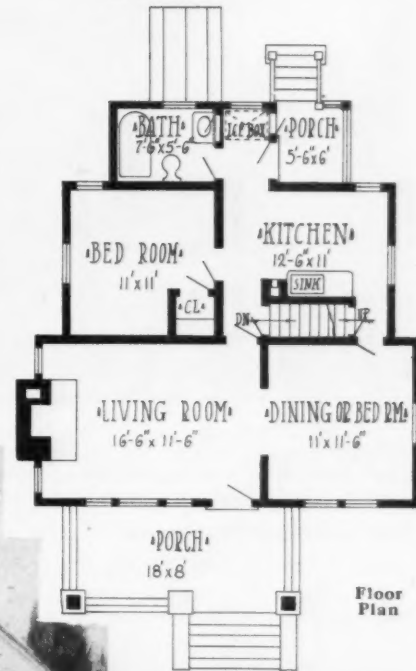
Here is a very neat four-room bungalow. It is 29 by 24 feet in size, together with an enclosed porch addition, which contains the bathroom and rear entrance.

The plan provides for a fine large living room and dining room with an archway between. The idea is that with this arrangement the dining room may be used for an extra bedroom when needed.

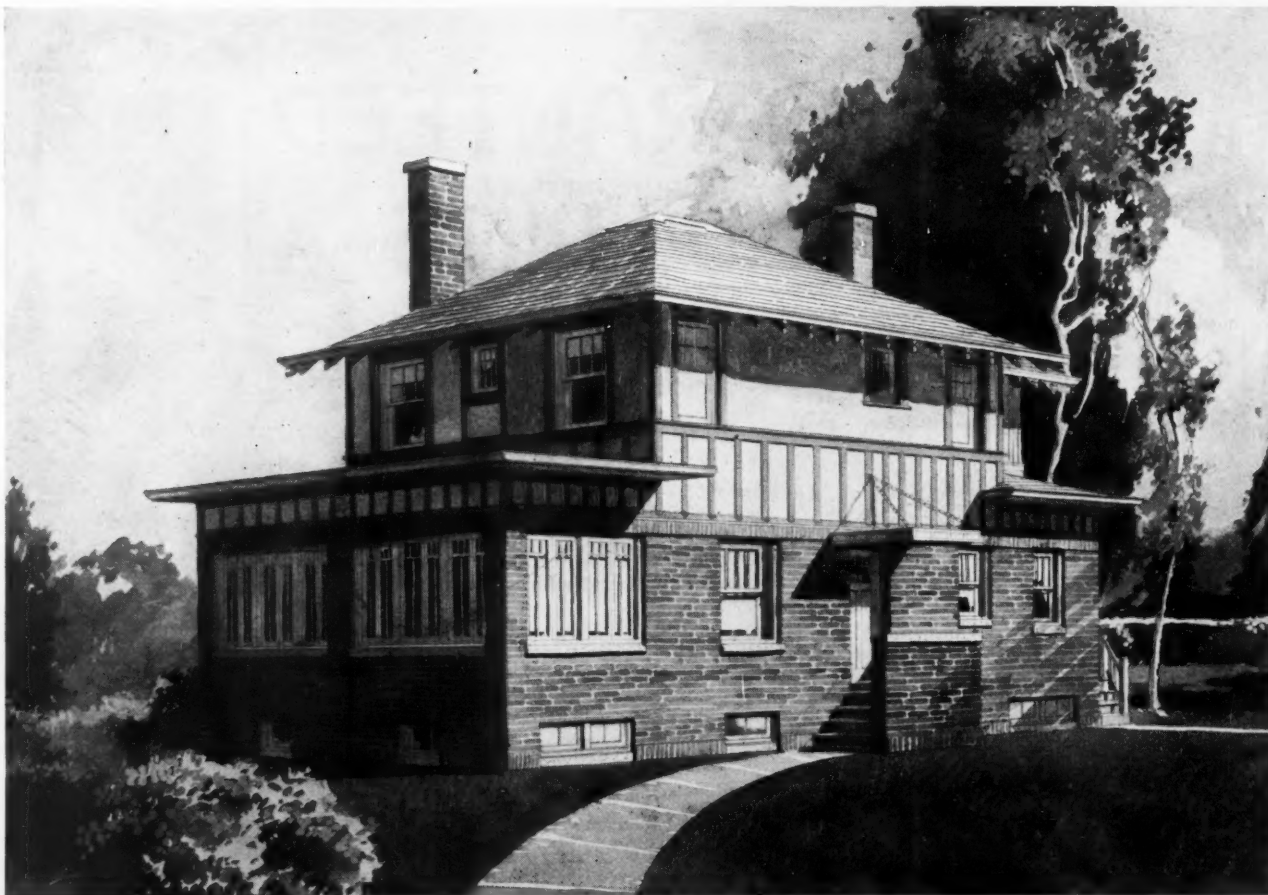
Little room is taken up with the stairway. It is necessary to have a good stairway to go down into the cellar. The same space is utilized overhead for a stairway to the attic, where considerable storage room is available.

The outside trim of this bungalow is especially interesting, because it gives the little house such a bright, cheerful, cozy, home-like appearance.

The outside chimney of rough brick at the end of the house corresponds with the porch piers.



Four-room Bungalow. Size 29 by 24 feet, with extension. We can furnish complete set of blue-printed working plans and typewritten specifications for only \$5.00 per set. Blue-prints consist of basement plan; roof plan; main floor plan; front, rear, two side elevations; wall sections; and all necessary interior details. Specifications consist of twenty-two pages of typewritten matter. When ordering, ask for Design No. 6641.



Brick Veneered and Stucco House of Nine Rooms. Size 24 by 44 feet. We can furnish complete set of blue-printed working plans and typewritten specifications for only \$9.00 per set. Blue-prints consist of basement plan; roof plan; first and second floor plans; front, rear, two side elevations; wall sections, and all necessary interior details. Specifications consist of twenty-two pages of typewritten matter. When ordering, ask for Design No. 6636.

Up-to-Date Brick and Stucco House

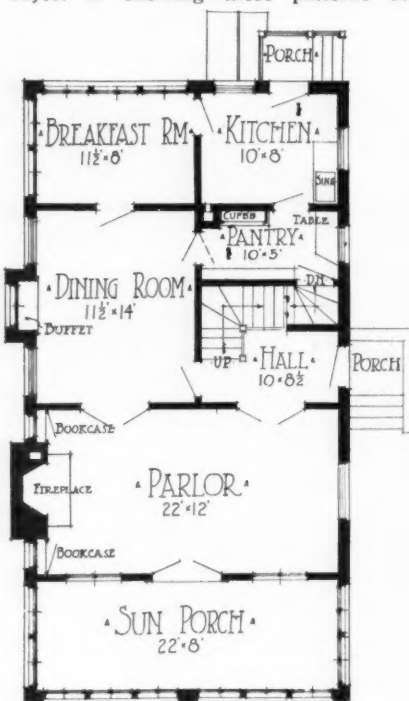
New features in house building are shown in this design. It is 24 feet by 44 feet in size and contains nine rooms, counting the sun parlor and the sleeping porch as rooms. A side entrance in the middle of the left wall works into a plan of this proportion to good advantage. It offers an opportunity to build a handsome open stairway that may be entirely shut off from the other rooms in the house. One objection to open stairways in modern house construction is that they take up considerable room. Very often they create a draught that is more or less unpleasant.

There is very little waste room in this hallway, either upstairs or down. It is conveniently arranged on both floors so as to reach the different rooms without any unnecessary long passages.

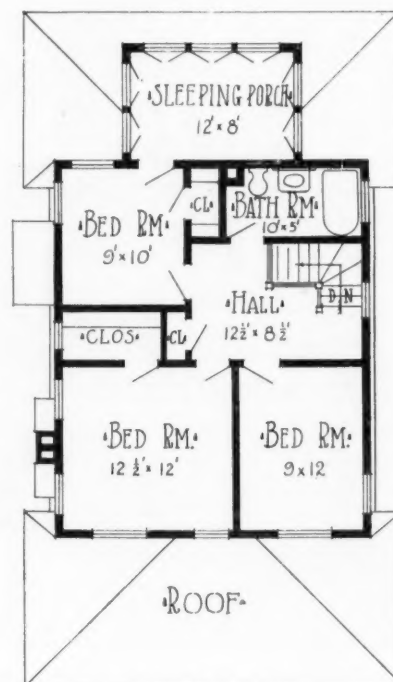
There are many interesting features in regard to construction which are shown in detail on the three pages following. While the house is unusual in many respects, it will be noticed that there are no difficult details. The object is to use stock patterns of millwork that are carried regularly by lumbermen. These stock patterns are as attractive

as special designs that cause delay and run into extra expense. In fact, the object in showing these patterns so

carefully is to call especial attention to the combinations of stock patterns that work out so nicely in the trim.



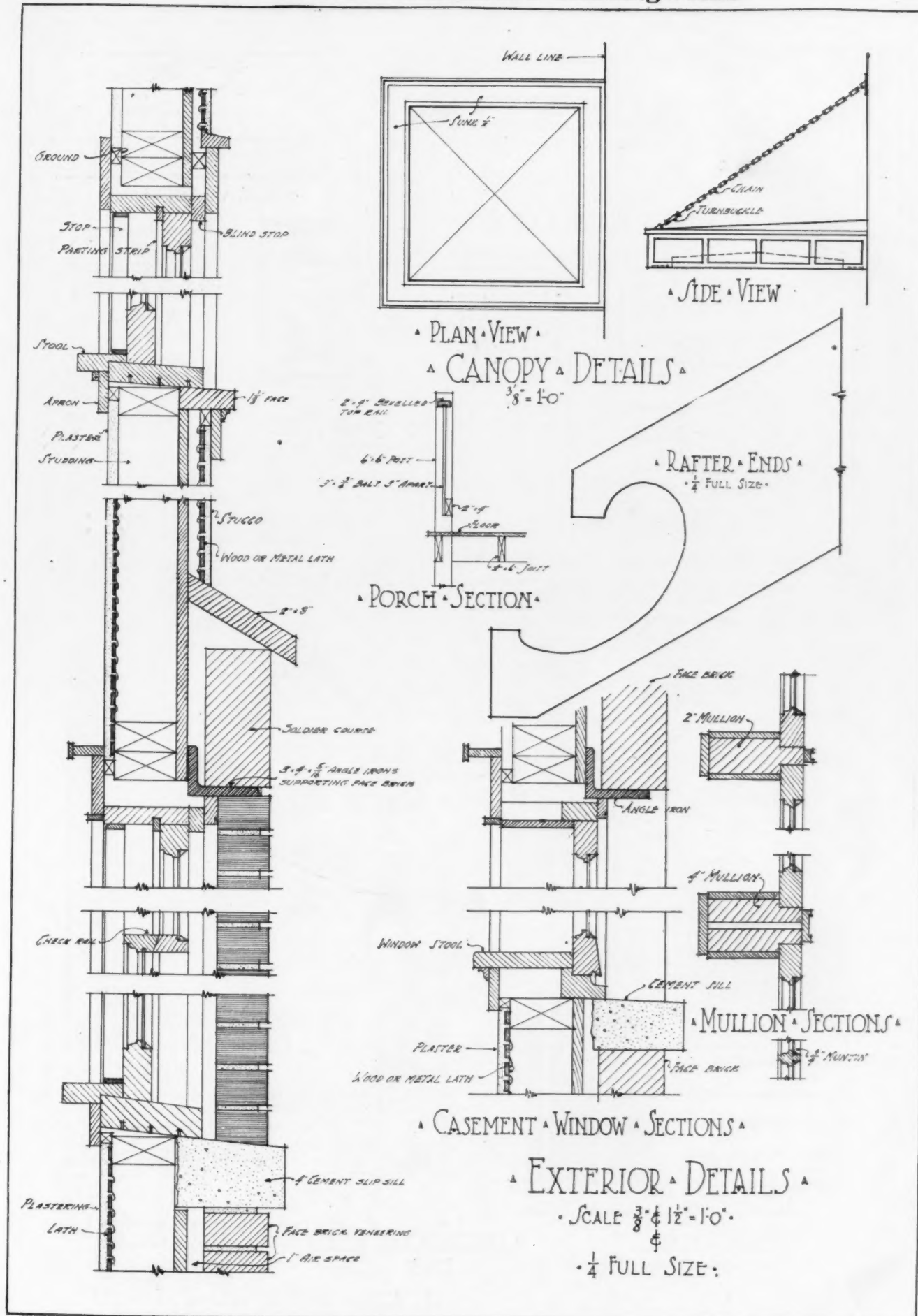
First Floor Plan.



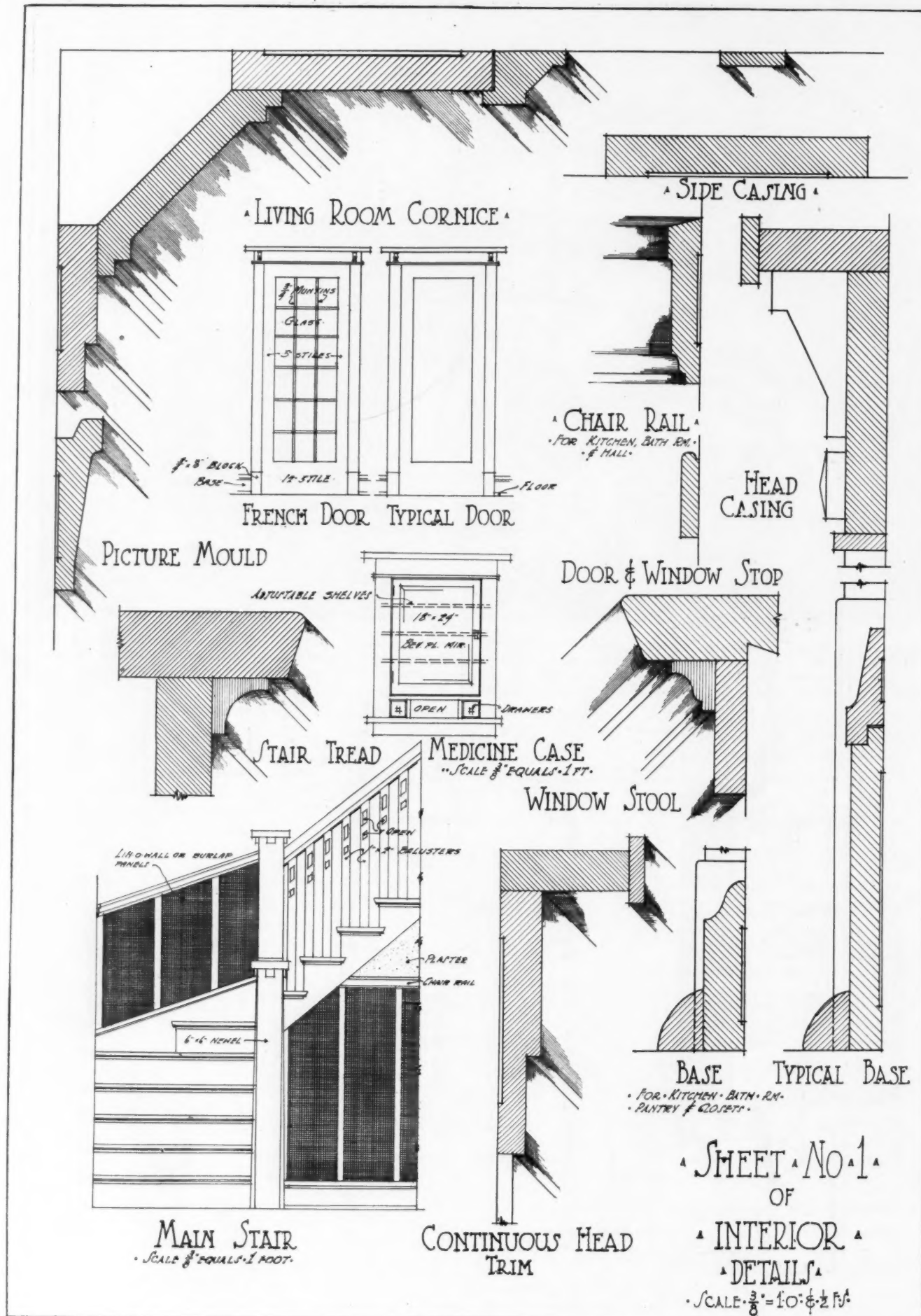
Second Floor Plan.

Arrangement of House, Size 24 by 44 feet.

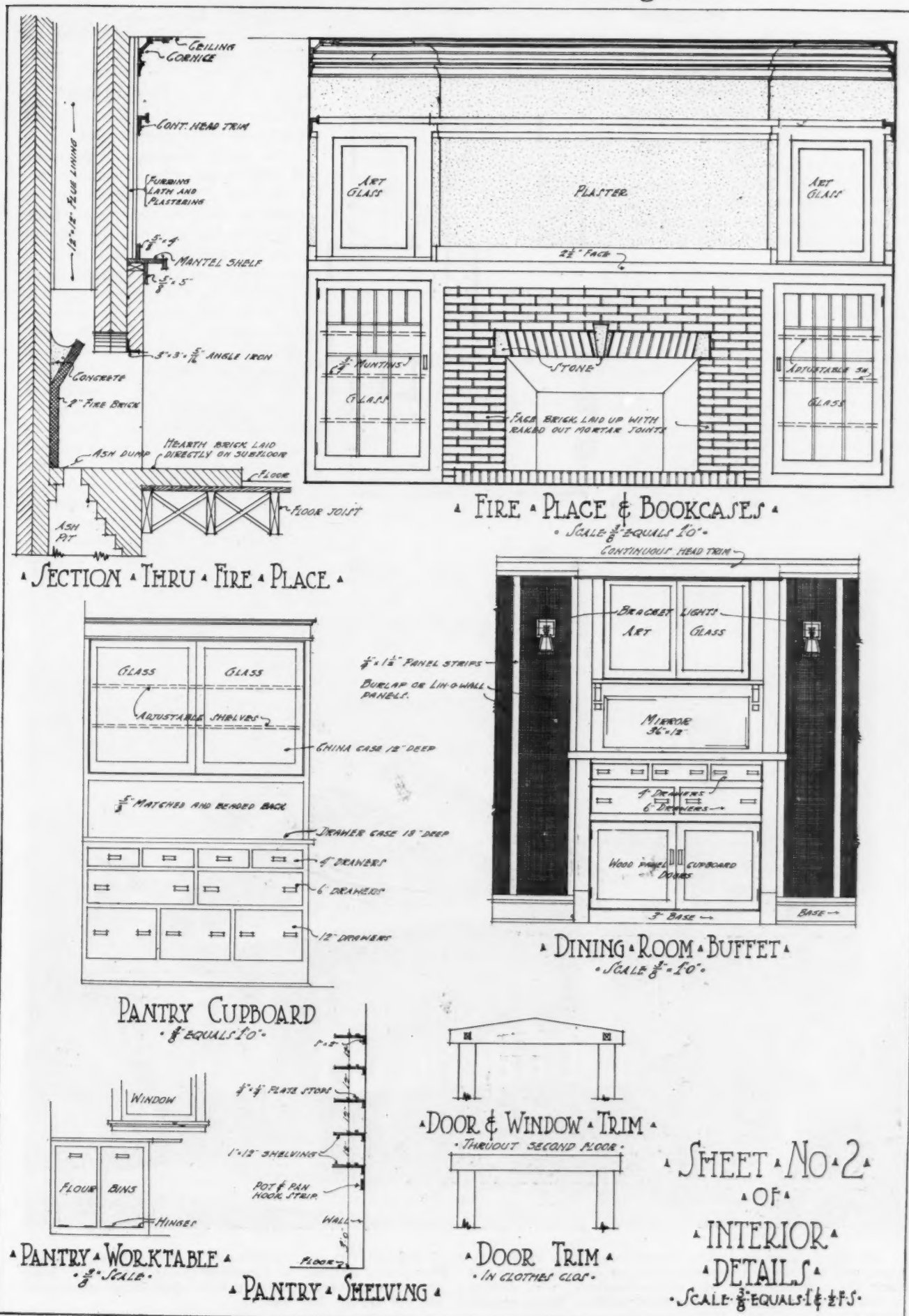
For Interior and Construction Details of this House see Next Three Pages.



EXTERIOR DETAILS OF CONSTRUCTION, TO SCALE, OF BRICK RESIDENCE
 (DESIGN 6636) SHOWN ON OPPOSITE PAGE.



DETAILS OF INTERIOR FINISH, TO SCALE FOR BRICK AND STUCCO RESIDENCE
 (DESIGN 6636) SHOWN ON PAGE 50.



ADDITIONAL DETAILS OF INTERIOR FINISH, TO SCALE, FOR BRICK AND STUCCO RESIDENCE (DESIGN 6631) SHOWN ON PAGE 50.

Cottage House of Bungalow Design

A five-room cottage house, which resembles a bungalow in appearance, is shown herewith. It contains a living room, 17 feet 6 inches by 13 feet 6 inches, with a fine fireplace and an extra large mullion window to give plenty of light.

The plan provides for a front hall 6 by 10 feet. This hall really is part of the living room, but provision is made to close it off in the winter time with curtains as a protection against the cold from the front door.

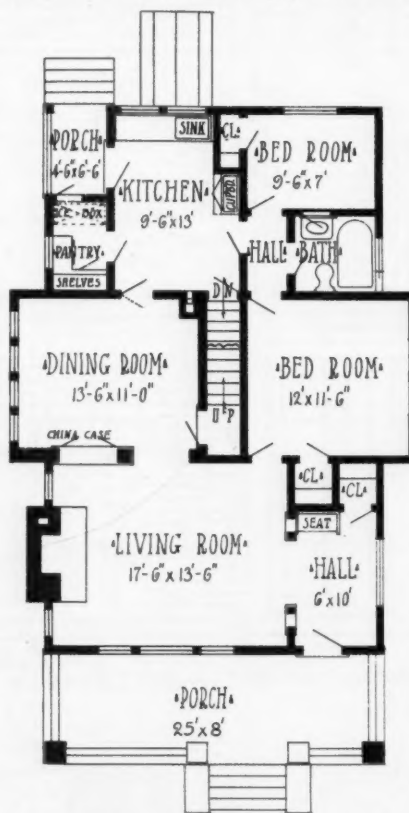
There are two bedrooms and a bathroom on one side of the house, which are connected by means of a short hallway. The bedrooms are carefully planned for the proper placing of furniture without coming in contact with doors or windows.

The bathroom, while small, is very neat and well planned and it is easy of access without being conspicuous.

A rear corner porch with back steps makes a pleasant kitchen annex, which would naturally be used as a sort of kitchen workroom in the summer. There is a small door opening from the porch into the pantry to put ice into the ice-box, a provision which every housekeeper appreciates to prevent tracking dirt into the kitchen.

There is a good straight stairway from

the kitchen down into the cellar. The length is sufficient for easy risers and



Floor Plan of Bungalow, Size 25 by 40 feet.

wide treads. There is so much running up and down stairs from the kitchen to the cellar that special attention is given to this feature. Over the cellar stairs steps to the upper floor are placed. In this house the second floor contains one good room besides storage space.

The outside appearance of the house is rather massive for a house of this size. This effect is produced by the manner in which the front porch is built. The two gables with roofs of different pitch are somewhat unusual in house construction, but it varies the monotony of gable roofs. The manner of paneling the front porch gable also lends variety to the exterior. Stucco panels bordered with light timbers give a different finish that is pleasing as well as distinctive.

No attempt is made to match the chimney by trimming other parts of the house in a similar manner. The chimney is constructed of rough finished reddish brown brick, and stands exposed as a special decorative feature. Altogether, the outside appearance of this cottage house is very attractive. It is also unusual. There would hardly be another house in town similar to it. A good many persons when contemplating building a house study plans to get away from the stereotyped ideas that happen to be common in the neighborhood.



Cottage house containing five rooms. Size 25 by 40 feet. We can furnish complete set of blue-printed working plans and typewritten specifications for only \$5.00 per set. Blue-prints consist of basement plan; roof plan; main floor plan; front, rear, two side elevations; wall sections, and all necessary interior details. Specifications consist of twenty-two pages of typewritten matter. When ordering, ask for Design No. 6642.

Extra Pretty Eight-Room Bungalow

A Northern bungalow, with a good cellar, five rooms on the first floor and three bedrooms on the second floor, is shown in this design. This house is 34 by 38 feet on the ground. The upper floor is the same width, but is shortened somewhat in the rear, because of the low part of the roof. Still there are three good bedrooms with considerable closet room, besides a balcony at the back. This balcony is intended for

taken up with a large fireplace and book shelves with elevated windows over the book shelves.

The stairway in this house occupies as little space as possible. It is straight up from the living room and straight down to the cellar from the back hall.

A feature that will please housekeepers who are obliged to keep help is the bedroom and toilet on the first floor. These conveniences are practically shut away from the main part of the house.

Another very pleasant feature is the library or den. On one side of this room is wall space especially designed for a davenport placed with one end near the double mullion window, suggesting a quiet, comfortable place for reading.

Outside, the bungalow is sided with shingles stained dark. Some might prefer cement plaster siding or ordinary clapboards. Any of these work out satisfactory, making an artistic bungalow design.

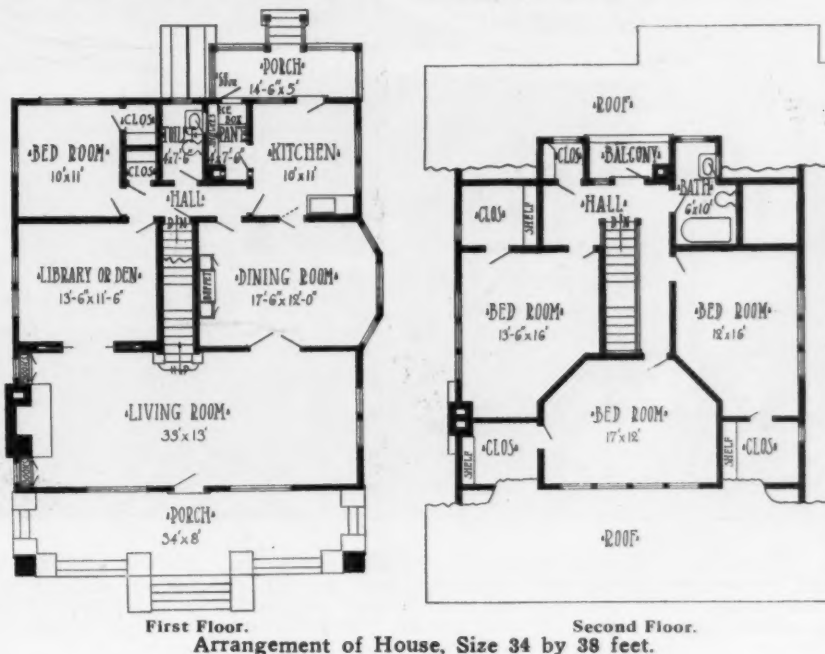


Pleasant Eight-Room Bungalow. Size 34 by 38 feet. We can furnish complete set of blue-printed working plans and typewritten specifications for only \$8.00 per set. Blue-prints consist of basement plan; roof plan; first and second floor plans; front, rear, two side elevations; wall sections; and all necessary interior details. Specifications consist of twenty-two pages of typewritten matter. When ordering, ask for Design No. 6638.

a sleeping porch, if so desired.

The idea of extending the main part of the roof to cover the front veranda is economical in construction and it is very pleasing in appearance. The plan of running a truss from one corner pier to the other leaves a clear view from the big living room windows that is free from obstructions. For the same reason it will be noticed that the railing across the front of the veranda is quite low. There are two splendid large windows in the front of the living room, and the idea of our architects was to admit as much light as possible through these rooms, as well as to have a clear view in front.

Large living rooms are not only fashionable, but they are comfortable, especially when built light and airy as this one is. Thirty-three feet in width by 13 feet in depth gives room enough to move about. Such a room may be comfortably well furnished without creating a crowded appearance. One end is



Western Style Four-Room Bungalow

A neat, well designed, little bungalow is shown on this page. It is 32 by 28 feet on the ground and contains four rooms, bathroom, pantry, and three clothes closets.

The front presents a neat, clear cut and especially attractive appearance. The nearly flat roof, covered with alternate courses of shingles and asbestos ready roofing, presents a unique bungalow effect. The exterior siding in "rustic."

This manner of construction gives a delightful front entrance, trimmed to correspond with the triple mullion window and corner projection of the gables. While the porch looks small, it is 16 by 9 feet, which gives room for comfortable porch chairs in the recesses formed by the low brick walls.

It will be noticed that there is considerable width to the front steps. There is something about bungalow construction that demands breadth of dimensions. This general keynote should be followed through the different details as far as possible.

The living room is 15 by 16 feet 6 inches. There is a coat closet to the left of the front entrance door, which is a great convenience in a small house where storage room is an object. A similar closet off the one bedroom pro-

jects into the living room in the opposite corner, leaving room for a davenport or a wide built-in seat in front of the big side window. This makes a comfortable cozy corner for reading or sewing.

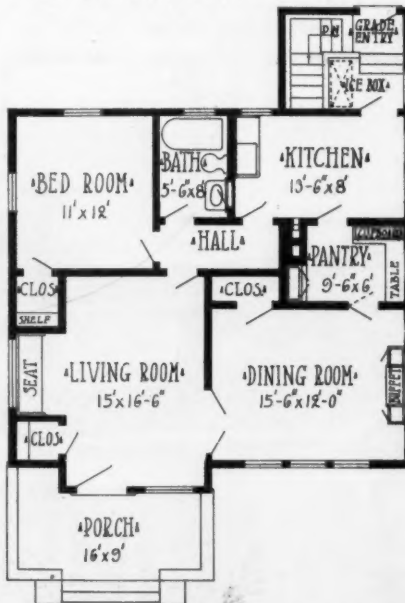
The bedroom is nearly square, being 11 by 12 feet in size, with a good closet for storage. Next to the bedroom and with a door opening from the back hall is the bathroom, which also is generous

in size, being 5 feet 6 inches by 8 feet. This width gives room enough to turn the bathtub across the far end of the room. The bathroom, besides containing the usual bathroom outfit, has also a medicine cupboard built in the partition. This medicine cupboard has a plate glass mirror fitted as a panel in the door.

The arrangement of the dining room, pantry and kitchen is especially good. Where it is possible to connect the dining room and kitchen with a pantry passageway, as done in this plan, the idea is well liked.

Another special feature of the plan is the grade entrance at the back, which gives an enclosed stairway leading to the cellar. Likewise, from the grade entrance there are steps up into the kitchen. This is a sort of storm shed protection to both the kitchen and cellar entrance. It also gives an outside way of getting into the cellar and for carrying out ashes without going through any part of the house. These same steps, together with the floor at the entrance inside the entry door, are made of concrete.

This enclosed entrance way also provides a place for the family refrigerator, so that ice may be brought in without tracking through the kitchen. At the same time the refrigerator is conveniently placed.



Main Floor Plan of Bungalow,
Size 32 by 28 feet.



Four-Room Western Bungalow. Size 32 by 28 feet. We can furnish complete set of blue-printed working plans and typewritten specifications for only \$5.00 per set. Blue-prints consist of basement plan; roof plan; main floor plan; front, rear, two side elevations; wall sections and all necessary interior details. Specifications consist of twenty-two pages of typewritten matter. When ordering, ask for Design No. 6639.

Shingled Bungalow Containing Four Rooms

A small, neat, and exceptional attractive bungalow is shown in this design. It is 29 feet 6 inches by 31 feet in size, exclusive of the front porch.

The outside appearance is distinctive, because of the manner in which the

one, so that the furnishings of the different rooms are attractive, as seen through the opening.

The vestibule entrance is quite a protection against cold in winter. This arrangement also provides a corner that is utilized to advantage for a clothes closet opening off from the bedroom.

At the rear is a grade entrance with

easy access to the cellar and a few steps to go up into the kitchen. The cellar way is closed off by an extra door, which may be kept closed and locked if necessary. The rear projection for the kitchen gives an opportunity to get an extra window or two.

Also the plan provides for a very convenient pantry, which also is well lighted

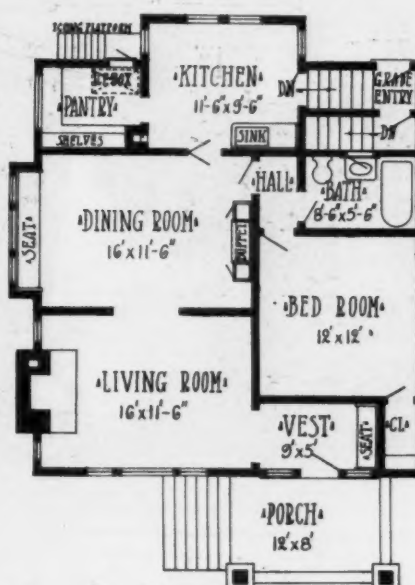


Attractive four-room bungalow sided with shingles. Size 29 feet 6 inches by 31 feet. We can furnish complete set of blue-printed working plans and typewritten specifications for only \$5.00 per set. Blue-prints consist of basement plan; roof plan; main floor plan; front, rear, two side elevations; wall sections; and all necessary interior details. Specifications consist of twenty-two pages of typewritten matter. When ordering, ask for Design No. 6640.

gables are treated. A projection out from the dining room to hold a window and built-in seat is protected by an auxiliary roof, projected and corniced in the same way as the main gable. The artistic treatment of gables has always been a study. It seems to have been managed very nicely in this case. The trim of the gabled roof over the front porch corresponds with the other gables. The effect is neither heavy or light, but is characteristic bungalow construction.

The placing of the front porch over to one side leaves the large window in the front of the living room clear of obstructions of any kind, which is a great advantage, both as regards light and the view from the window.

The living room, dining room and kitchen are splendidly well arranged for convenience and for appearance. The archway between the living and dining room makes the two rooms almost like



Floor Plan of Bungalow, Size 29 ft. 6 in. by 31 ft.

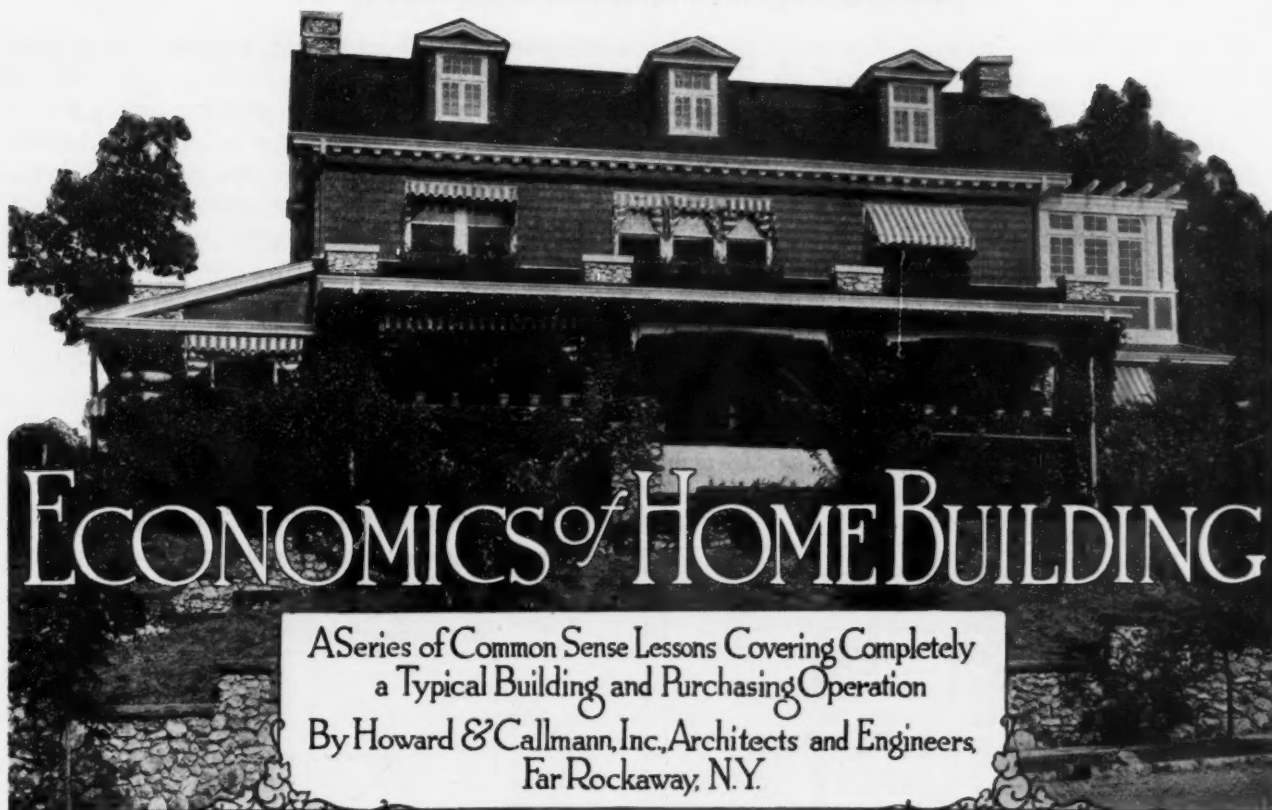
by an extra large window. The outside arrangement for putting ice into the ice box is a good one. Altogether the plan is very interesting and very complete.

Provision is made for a good bathroom, a splendid big fireplace in the living room, including all the necessary modern improvements. The interior woodwork is designed to use regular stock patterns of base, mouldings, and other trim, which will match the built-in buffet in the dining room and the fireplace trim in the living room. The intention is to carry the same design through the front part of the house, including the vestibule and bedroom.

The bathroom is intended to be rather severely plain and finished in white enamel. The kitchen trim, while less elaborate than the other part of the house, is also very neat and attractive.



Photograph of Beautifully Finished, Elaborate Chicago Dining Room. The Large Built-in Buffet with Its Artistic Leaded Glass Doors, the Brick Fire-place with Wood Mantel, the High Wood Paneling Around the Room, and the Attractive Ceiling Beams are all Notable Features of this Room. Note Also the Effectiveness of the Dome Light Over the Table.



ECONOMICS OF HOME BUILDING

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By Howard & Callmann, Inc., Architects and Engineers,
Far Rockaway, N.Y.

IN TWELVE PARTS—PART III

How to Understand a Building Plan

TO FIND the area of a building, multiply the width of the first floor by the depth.

(50) It is necessary to understand a plan and become familiar with the sizes of rooms, as the cost of a building is regulated to a considerable extent by the area which it covers. If the rooms are made larger than required, the cost of the building will be increased without any material benefit being received.

(51) Measuring the rooms of any house is a good method to get the sizes in mind.

(52) An ordinary builder's 2-foot rule is required. Every inch upon which, for the purpose, will indicate 4 feet.

$\frac{1}{4}$ inch will equal 1 foot.

$\frac{1}{2}$ inch will equal 2 feet.

$\frac{3}{4}$ inch will equal 3 feet.

1 inch will equal 4 feet, and so on.

This means that $\frac{1}{4}$ of one inch on the rule, or scale, as it is called, represents 1 foot. With this scale a diagram of a room can be made on paper. Let us take, for example, a room 15 feet wide by 16 feet deep. On an ordinary piece of paper draw a horizontal line $3\frac{3}{4}$ inches long; this will represent the width of the room (15 feet). At each end of this line draw a line

Architectural Conventions Fully Explained as Used on Working Scale Drawings—Typical Floor Plans Presented with Reasons for the Various Arrangements

at right angles, 4 inches long, this will represent the depth of the room

(16 feet). Connect the two ends of the lines drawn at right angles to the horizontal line. The resultant figure will represent the size of the room proportionately reduced to scale, $\frac{1}{4}$ of an inch on the drawing equalling 1 foot in the room. If the walls are 6 inches thick draw parallel lines around the diagram 6 inches by the scale ($\frac{1}{8}$ of an inch) outside the first lines. The space within the two lines will represent the thickness of the walls.

(53) Look at the room and imagine it cut horizontally in two at a point half way between the floor and ceiling, and the upper portion removed (if this were possible). A drawing made of what remained would be a plan. On a plan the openings in the walls, partitions, etc., are indicated by lines drawn at right angles across the lines indicating the partitions or walls.

Next mark on the diagram the correct position of the doors, windows and fireplace in the room. Starting in one corner of the outside wall, measure with the 2-foot rule the distance to the nearest window, measure to the line of the movable sash. Suppose it is 3' 6"



Get a Definite Idea of Dimensions as Applied to Room Sizes.

(three feet six inches—feet are indicated by one ' and inches by two ") mark this on the diagram by a line drawn across the two lines indicating the outside walls $\frac{7}{8}$ of an inch from the corner ($\frac{7}{8}$ of an inch will be 3 feet 6 inches by the scale). Then measure the width of the window sash that moves up and down, say it is 3' 0"; mark a cross line 3' 0" by the scale from the first cross line; this will indicate the window. Continue in the same way around all four walls, marking on the diagram any breaks, all doors, windows and fireplace.

Measure a room and bathroom on the second floor and make a diagram in the same way. This simple practice should enable anyone to understand a plan, as each line marked on the diagram will represent

what has actually been visible, whereas a new plan has to be visualized.

(54) It is good practice in studying over a set of plans to imagine you are in the building and let the lines indicate the walls, partitions, doors, windows, etc., as though you were really looking at them. This takes very little effort to acquire and is eminently practical.

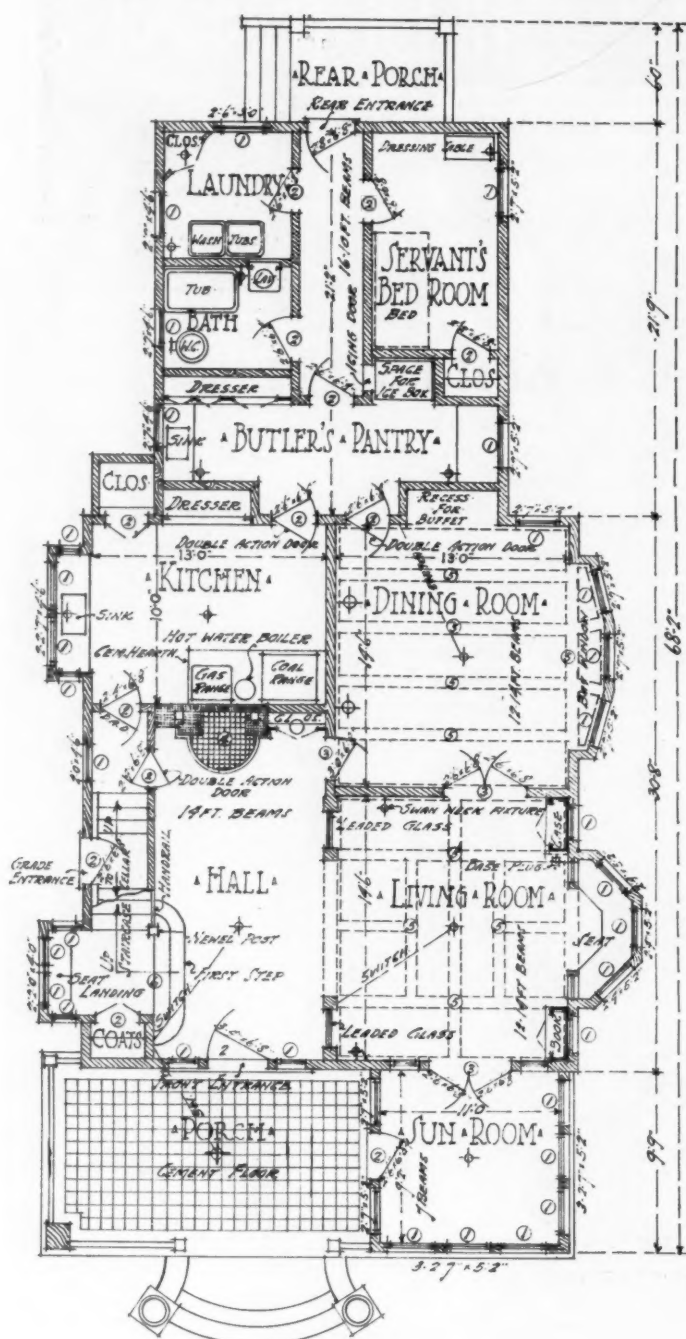
Example:

Make a measured plan of:
A first story room.
A second story room.
A bathroom.

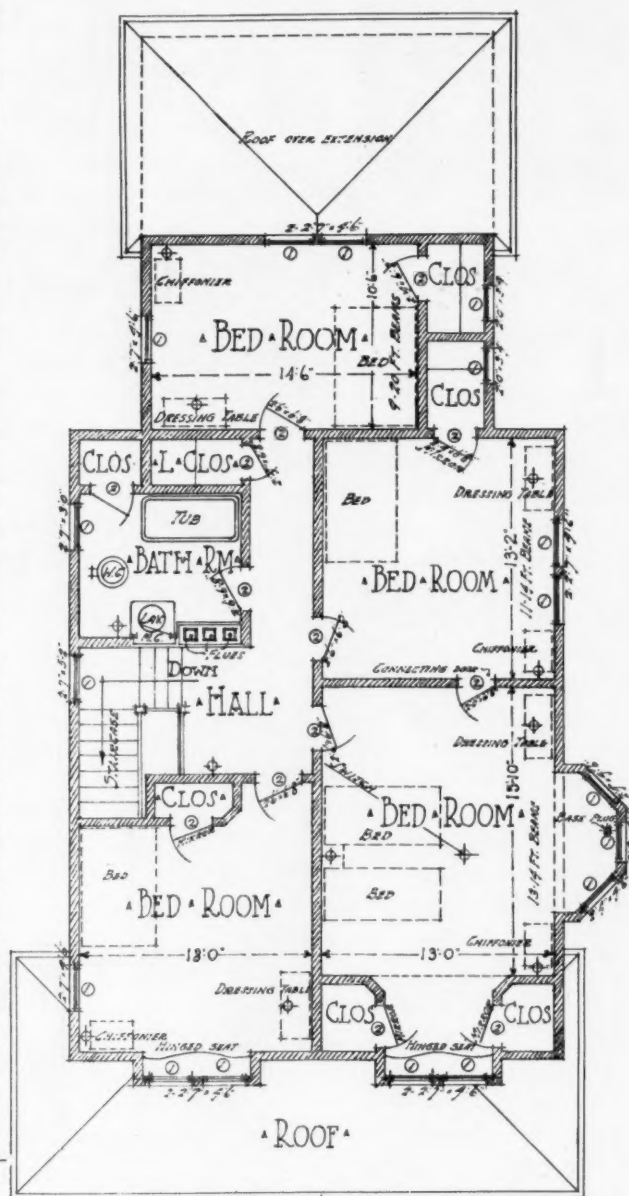
(55) The practice of measuring rooms is a preparation for the study of an architect's plan.

Description of Plan Shown on Diagram

These plans are drawn for a plot of ground 50 feet by 100 feet. It is more difficult to prepare plans for



First Floor Plan of Specimen Design.



Second Floor Plan of Specimen Design.

a small plot than for a large plot, as the requirements have to be worked out in a restricted area.

The double lines indicate the outside walls and partitions. The cross lines on the outside walls indicate windows, and are marked with the figure 1. The sizes marked by the windows, for instance 2 ft. 7 in. by 5 ft. 2 in. indicate the size of the window sash. The first dimension is the width and the second the height.

Doors are shown on the inside partitions by spaces and are numbered with the figure 2. The line drawn at an angle at one side of each door space indicates the door, and the curve shows the swing of the door. Door should be hung on the correct jamb in order to get the best access to the room and should be clear of any other door. Closet doors should swing to admit the window light. (Jamb means the wood casing on which the door is hung and is set at right angles to the wall from plaster face to plaster face.)

The doors shown on the plans and marked with the figure 3 indicate French casement doors. This type of door has panes of clear or leaded glass within 12 inches of the floor and 4 inches of the top of the door, set in wooden bars, each door having 12 to 15 small lights each. These doors are attractive and usually hinged, but if desired they can be made to slide.

A fireplace is indicated by the figure 4. A special design is usually made for the mantel, or a mantel can be selected from stock.

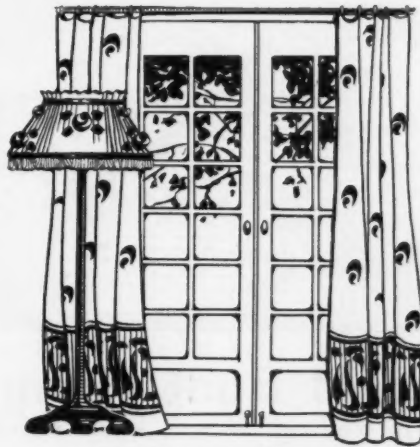
The dotted lines in the living room and dining room indicate false ceiling beams, marked with the figure 5. The sizes of the ceiling beams should be called for in the specifications, the dotted lines indicate how they are to be laid off or spaced on the ceiling.

Doors and windows if correctly located in a room will provide proper space for the furniture.

The dining room is planned as follows: The ceiling light is located directly over the center of the dining table, space is arranged for a buffet near the butler's pantry door, easy passage is provided around the table for serving, the window light is ample and arranged for good ventilation. The approach to the dining room from the kitchen is through the butler's pantry. This is for convenience of serving, and the pantry acts as a trap for the smell of cooking.

The dining and living rooms are connected by means of French casement doors which will give good ventilation from the front to the rear of the house.

The hall and living room are divided by columns with leaded glass lights between the columns, the division is sufficient to accentuate the living room from the hall, yet the hall and living room can



Double Doors; Full Glazed a Popular Modern Feature.

be treated as a "living room hall" if so desired.

The average living room furniture consists of a piano, table, writing desk, several odd chairs and a small table for a lamp.

There is a coat closet in the hall on the first stair landing, three steps up and convenient to the front door.

The staircase is shown by a succession of lines close together, marked with the figure 6. This should have a window for light and at least one landing, as a straight staircase is commonplace

and a landing relieves it and reduces the danger of accident.

In all modern houses two bathrooms are desirable, one for the family and one for the servant. The main bathroom should be fitted with a towel rack, a medicine closet, a roll rim bathtub, pedestal lavatory, and syphon acting water closet with lowdown porcelain tank. White tile set on the floor and side walls is sanitary and produces a handsome finish.

The bedrooms are arranged with reference to the location of the furniture. In the main bedroom a space is provided on an inside partition for twin beds. There are spaces near the windows for the bureau and chiffonier, with pendant electric fixtures placed over them. A small table is usually placed between the beds. Two chairs and a rocker will complete the furniture for the average room. This bedroom has a connecting door to one of the other bedrooms in case there are children.

The other bedrooms are laid out for three-quarter beds requiring an interior wall space of 4 feet; and the spaces necessary for the furniture are similar to the main bedroom.

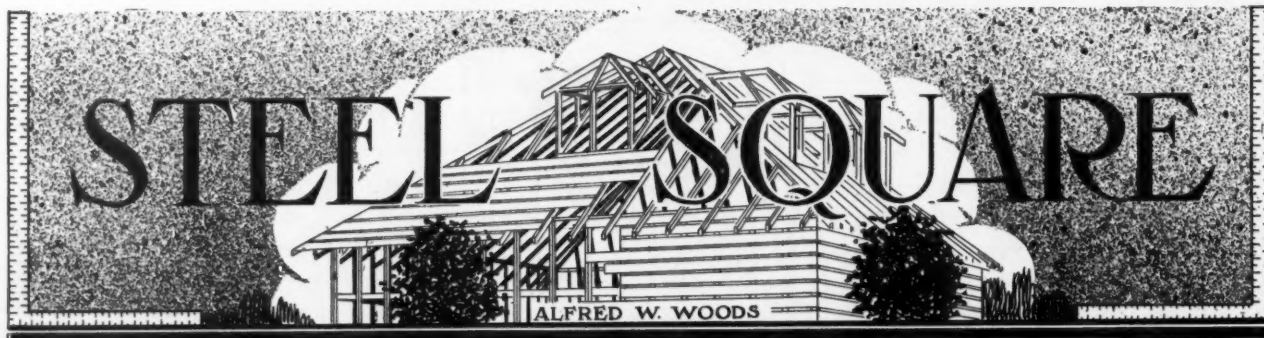
A good closet is provided for each bedroom and two closets for the main bedroom. The linen closet is in the second story hall.

Windows in all rooms are arranged to give good light and ventilation.

Working Department. It will be noticed on the plan that the kitchen is placed centrally, adjoining the dining room. This is a good arrangement in a small house. A room and bathroom for the servant is located on the first floor. This does away with the necessity of a back stairway and has proved a good arrangement. The upper part of the house is then for family use exclusively.

The kitchen is provided with a closet, sink, dresser, coal and gas ranges, boiler, water heater, etc. In the butler's pantry there is a space for the ice-box convenient to the kitchen which has the benefit of thorough ventilation. There is a pantry sink and dresser for china and glasses.

The laundry is also located on this floor.



Gambrel Roof Framing

SHOWING A GOOD PROPORTION AND THE FIGURES ON THE STEEL SQUARE TO USE TO OBTAIN THE CUTS FOR GAMBREL ROOFS

By A. W. Woods

QUITE recently we have been asked a number of times to illustrate the proper pitches for a gambrel roof, and to make our position clear in the outset, will say that if there is any one rule that could justly be called the proper proportions to use, we are not aware of it. In proof of this we do not have to go very far to substantiate this fact. Look

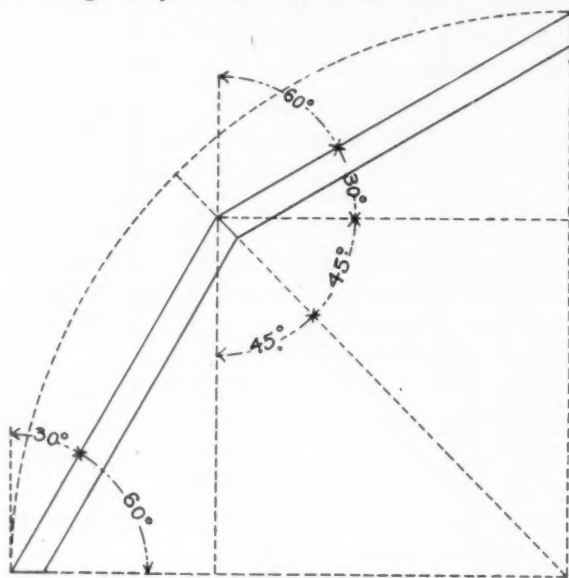


FIG. 1.

Recommended Angles at the Gambrel Joint.

over the back numbers of this, or any of the building trade journals and see the different ideas of what the proportions should be, generally exploited as "my rule," or "my way" of framing the gambrel. So we are not going to try to set up any rule as being the proper thing to the exclusion of all others, but will give a method that we consider good proportion to follow, as shown in Fig. 1.

Here the pitches are 60 to 30 degrees, with the total rise equal to the total run; the rise of the steeper pitch being equal to the run of the lesser pitch. Consequently the rafters are identical in length and cuts, and when in position are simply reversed—that is, the

seat cut on one of the rafters becomes the plumb cut on the other, and vice versa for the plumb cut, provided they were to be cut. But since these rafters should join one another at the knuckle on the bisecting line, this furnishes a cut that taxes the ingenuity of most carpenters. They must first resort to a diagram to know just how to place the steel square to obtain the required cut, since the line of juncture cannot follow either the seat or plumb line. It should be remembered, nevertheless, that they must be used to reckon from. Since their relative position forms a right angle triangle, the line of juncture must be at the half-way point between the two; and as this furnishes an angle of forty-five degrees, all that is necessary is to apply the square to these lines (seat and plumb) with the figures that give the 45-degree cut, as shown in Fig. 2.

This illustration also shows what figures to use to obtain the 60 and 30-degree plumb and seat lines, which are shown to be 12 and $6\frac{11}{12}$. However, we wish to say in this connection, that these figures are not absolutely correct, but only a near equivalent in

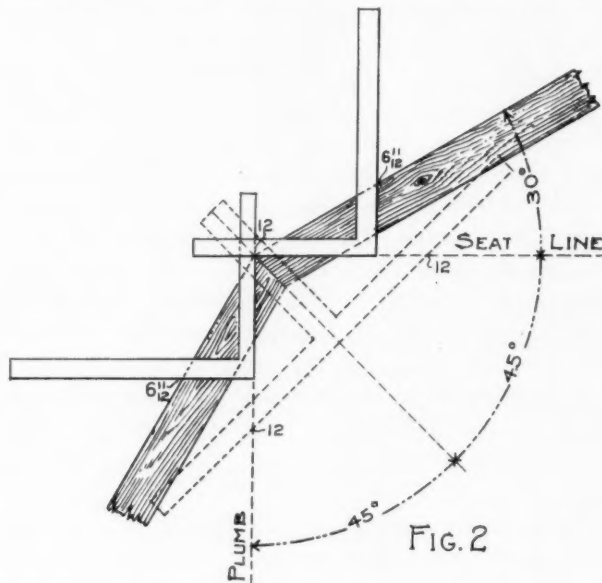


FIG. 2

Applying the Steel Square to Obtain Cuts.

common fractions to that given decimally, as is used for trigonometric work. The correct figures are as 6.9282 is to 12. Thus, it will be seen that the nearest equivalent that can be had by the markings on the steel square are 12 and $6\frac{15}{16}$; or if the side of the square is used that is divided into twelfths, the nearest that can be had is $6\frac{11}{12}$ is to 12. The difference is .0093 too much in the former and .0115 of being enough in the latter. Take your choice.

But in saying this, we fear some will accuse us of splitting hairs by going into so minute measurement. The object in doing this is to show the difference in what may be considered absolute and practically correct results. For all practical purposes in roof framing, it might just as well be considered as 7 is to 12 as the difference could only be detected short of a mathematical calculation.

Say it is 7 and 12; and by letting these figures represent the length of the arms of a right angle triangle, then the length of the hypotenuse side would be 13.8924 ($13\frac{7}{8}$) inches, and represents the length of the rafter per foot run of the upper pitch, and also the same per foot rise of the lower pitch. In this case, the run of one set of the rafters being equal, the rise of the other, the total of the runs and rises will be equal, as shown in Fig. 1.

Knowing the figures to use on the square to obtain the angle for the pitches, it is an easy matter to lay off a diagram from which the measurements can be obtained by scale.

Fig. 2 shows the application of the square for obtaining the angles and cuts. If it is desired to adhere to the 60 and 30 degree pitches, these proportions should be used. A near equivalent may be had by dividing the total of the two runs into 19 equal parts, taking 7 of these parts for the short run and 12 for the long run and by letting the total of the two rises equal the total of the two runs will practically give the same result as shown in Fig. 1.



Setting Gable Brackets; Verge and Frieze Boards for a Bungalow Cornice

By I. P. Hicks

Estimator and Contractor, Omaha, Neb.

THERE are always different ways of doing work; some more or less difficult, and in some instances hard work is made of what might be fairly easy work if the work was planned and executed in the proper manner.

In putting up bungalow cornices where there are large and heavy brackets to set in the gables, it sure is a hard job to fit and set these brackets after the verge boards are set. Many set the verge boards first and prop them up with temporary braces and do not put in the brackets till the roof and cornice are about finished. We have done this way many times and know how difficult it is to put these heavy brackets in place and get them properly fitted and set.

In our opinion we have found an easier and far bet-

ter way to handle this kind of work. It is a very easy matter to locate and set the brackets, nailing them solidly to the sheathing, before the frieze or verge boards are set. In this way there is nothing to fit the bracket to and nothing in the way to get it set plumb and true.

Space the brackets off as shown in the sketch, Fig. 1. Now, in order to find the proper height to set the top of the bracket, see Fig. 2. S represents the top of the sheathing. R is the top of the rafter, also top of verge board. Draw a plumb line on the verge board at the outside corner of the bracket and from this square out a level line just enough to take in the thickness of the bracket; this is represented by T U; then the distance from R to T will be the distance to set the top of the bracket from the top of the rafter, measured

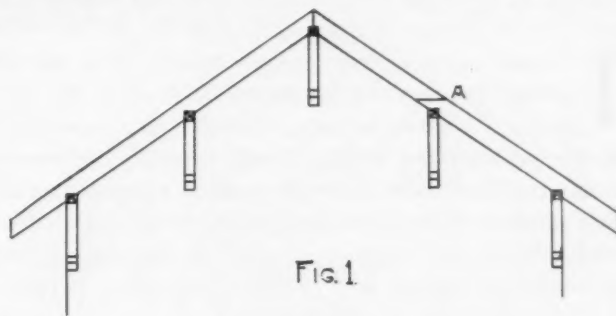


FIG. 1

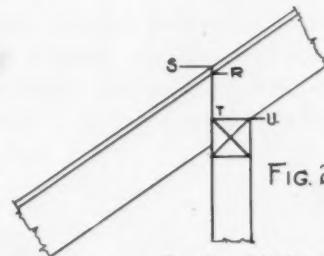
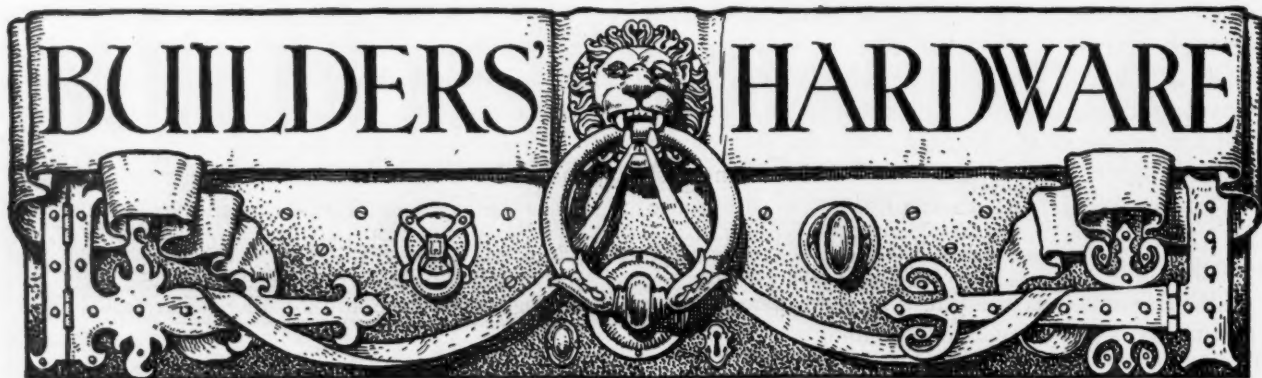


FIG. 2

Details of Gable Brackets.

on the plumb line. There can be no mistake about this method if you will be careful about your measurements. Then when you set the frieze and verge boards you have something to hold them up and it is easy to saw the little corners out of the frieze and verge boards to fit the brackets. You can place the verge boards and frieze top of the brackets to get the marks by which to make the plumb cuts by, and a sketch like Fig. 2 will always show the depth to cut out. In doing the work in this way the whole thing becomes an easy matter. Besides being easier, you can get a much better job and when you get on to the system the chances are that you will make quicker work of it, too. It will help you through with some hard and disagreeable work and prove an advantage that we think will be appreciated, especially by the men who have the work to do.

Very often the verge boards have to be spliced because none can be had long enough in one piece. When you have to splice a verge board, make the cut as shown at A in Fig. 1; this will make a joint that will always stay tight and will not draw apart like most joints in verge boards do.



Hardware and the Home

Part I. Designs

By Henry M. Schember

Head of Builders Hardware Dept., Hammacher, Schlemmer & Co.

IT would surprise the average builder if he knew with what interest hardware is studied by the man or woman having a home built; especially is this so with the latter. Being naturally endowed with good taste, and through modern education, she has taken up the subject of home furnishings with keen interest and when a selection of hardware is to be made, her ability and judgment are often beyond the understanding of the builder.

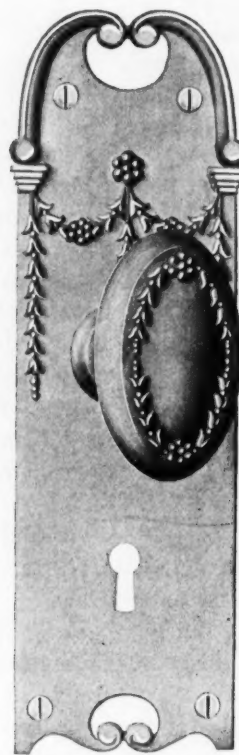
Designed hardware with its various finishes supercedes the ugly ornamental hardware in general use years ago, and day by day it is growing and becoming a bigger factor in modern home building. Many

builders have taken this in a matter of fact way, and with no further consideration, selecting such hardware as would strike their fancy, and caring naught as to its harmony with the color of the wood or the style of the trim. In this the average hardware man has been more or less to blame, knowing perhaps something about the designed hardware but not realizing its value towards a modern, well balanced home.

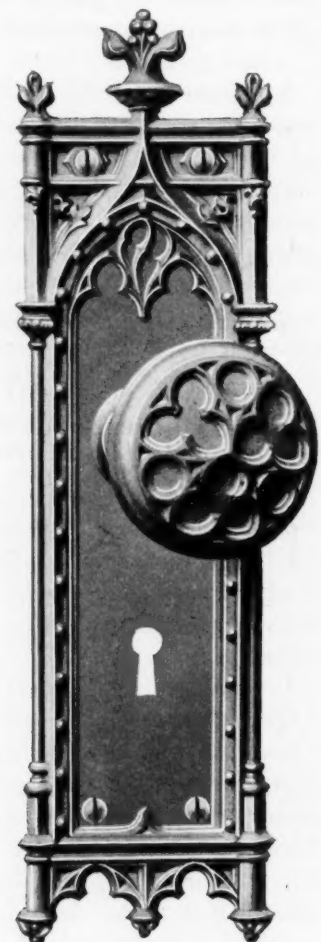
What an asset it would be to the builder if he could talk intelligently to his client regarding designed hardware and their proper color



Elizabethian.



Adam.



Gothic.

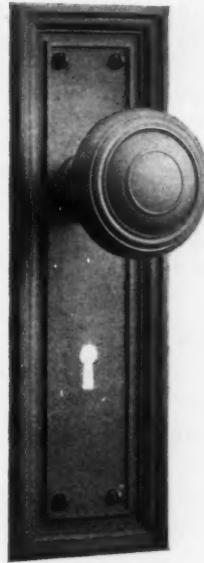
WELL DESIGNED EXAMPLES OF POPULAR DOOR HARDWARE.



Empire.



Louis XV.



Colonial.

RANGE OF POPULAR HARDWARE STYLES.

schemes, etc. It would open a new field and make his work so much more valuable.

The better hardware stores throughout the country are pretty well equipped with modern builders' hardware, and have sample rooms which, in many cases, are nicely fitted out to show the various designs and finishes to advantage. These stores generally have a staff of men who devote their entire time to this end of the business and the builder has the option of taking his client to the store or having a salesman call. In this way a selection can be made with the owner approving the various designs and finishes and the builder can give his suggestions, and in conjunction with the hardware man, suit the taste of the owner. This is the only satisfactory way and will avoid misunderstandings and dissatisfaction at the end.

Designed hardware is copied after the various schools of architecture and comprises designs made from beadings, flutings, shells, foliage, flowers, animals, etc., etc., according to the period. The range is sufficient for most all requirements, from the plain Colonial with its flutings, to the elaborate Louis XV and XVI with its delicate interlacing of flowers, leaves, fruit festoons, cherubs, etc. The following will give a fair conception of the different schools used in the manufacture of hardware and will be found a guidance for the builder:

SCHOOLS.

Adam	English Gothic	Louis XIV	English Renaissance
Colonial	French Gothic	Louis XV	Flemish Renaissance
Egyptian	German Gothic	Louis XVI	German Renaissance
Elizabethan	Italian Gothic	Mission	Italian Renaissance
Empire	Greek Gothic	Moorish	Modern Renaissance
Georgian	La'Art Nouveau	Roman	Spanish Renaissance

To describe at length the motives and origin of the different schools would require too much space, and

besides books covering the subject can be easily procured.

The schools are copied as closely as possible and are correct in every essential detail. Most of the designs are worked on cast metal, as wrought metal will not adapt itself for the delicate work necessary on some of the schools. In some cases, after the design has been cast, the metal is hand chased, which brings out in bold relief certain flowers, leaves, etc. The moulds are made with great care, and time and money are spent to reproduce the school correctly.

The trend at the present time leans to Adam, Colonial, Empire, Louis XIV, XV and XVI. They seem to be the more popular designs in vogue, but all schools are used more or less as it depends entirely upon the character of the house and its interior.

The manufacturers have and are still giving considerable study for the proper execution of the different designs, and in

this the architects of America should be mentioned, as their suggestions and support have had great influence in working up the line to its present high standard.

Two Elevators in One Shaft

In the big skyscrapers the space taken up by elevators is a large proportion of the space of the building; every space-saving idea is valuable. One building runs two elevators in one shaft. The first one is worked by the cable overhead, as usual. This car runs to the twentieth story without stop, and is local from there. While it is running local the second elevator, operated by plunger from below, operates local for the first twenty stories. Thus the space is made double use of, and half the necessary elevator space saved. Safety devices prevent the elevators operating in same "block."

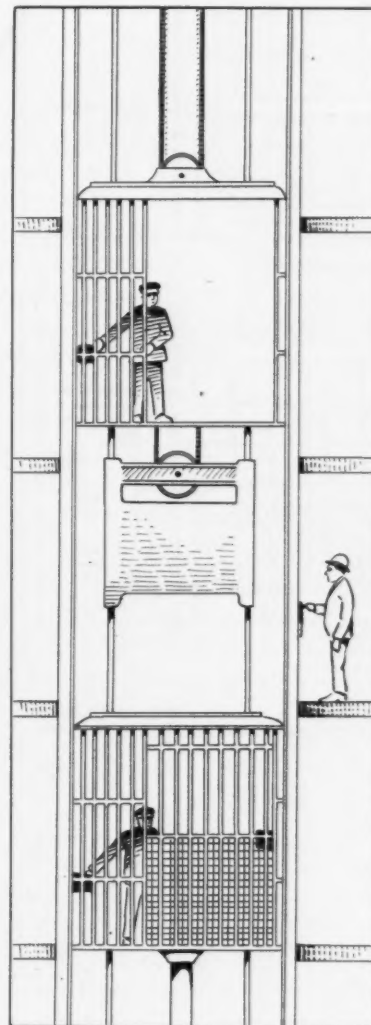


Diagram of Double-Duty Elevator Shaft.

Locking Garage Doors

PART III. ARRANGEMENTS FOR LOCKING RIGHT ANGLE DOORS

By E. J. G. Phillips

Engineer with the Richards-Wilcox Mfg. Co.

Right Angle Doors

An inspection of right angle doors will make it apparent that contrary to most sliding doors, they must have the locks applied to the *rear stile* instead of the front stile on single doors or the meeting stiles at the center for doors in pairs. From Fig. 10 it will be seen that the hanger, *Q*, holds the top front corner of the door in place while the bottom front corner is confined by the guide and stop, *R*. The rear hanger, *S*, operating in the side track simply carries the weight of the door, but does not in any way assist in holding the door against the opening. This must be taken care of by the lock. Another guide stop is set into the floor at *R'* to catch the bottom of the door when open.

When necessary to lock the doors from the outside,

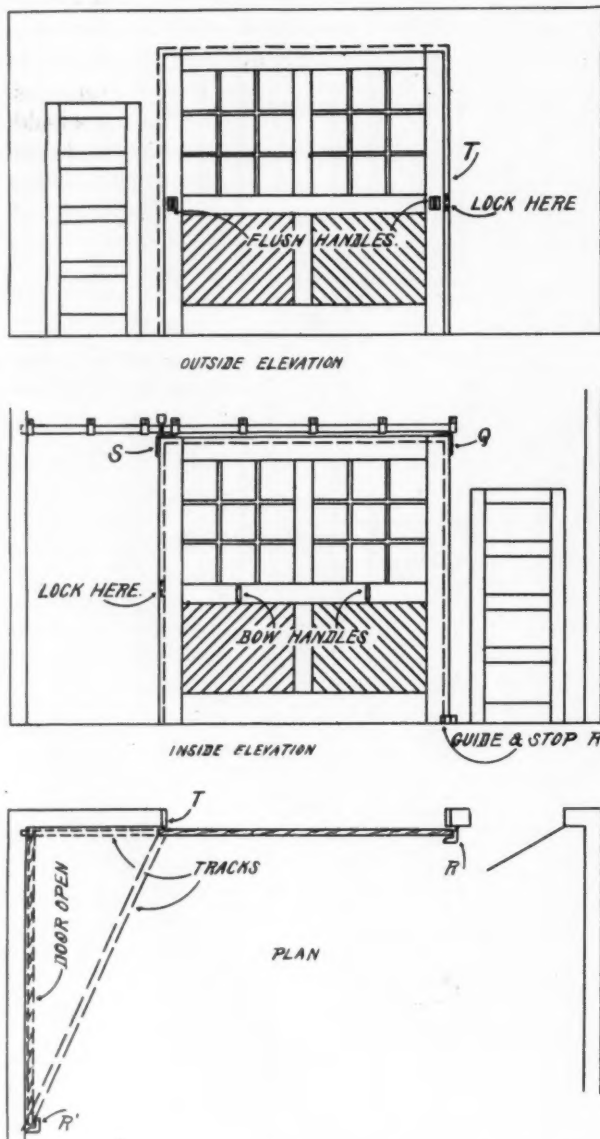


Fig. 10. Outside and Inside Elevations and Plan of Right Angle Garage Door.

use the mortise lock described in Fig. 4, mortised into the jamb, *T* (also see Fig. 11). Set the lock so the hook bolt will be toward the top and the trip at the bottom; which is just the reverse from the way the lock is set in an ordinary sliding door. The keeper

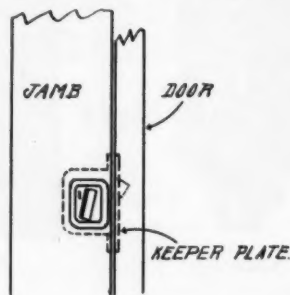


Fig. 11. Details of Door Jamb Lock.

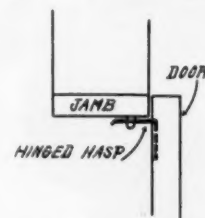


Fig. 12. Padlock Fastener.

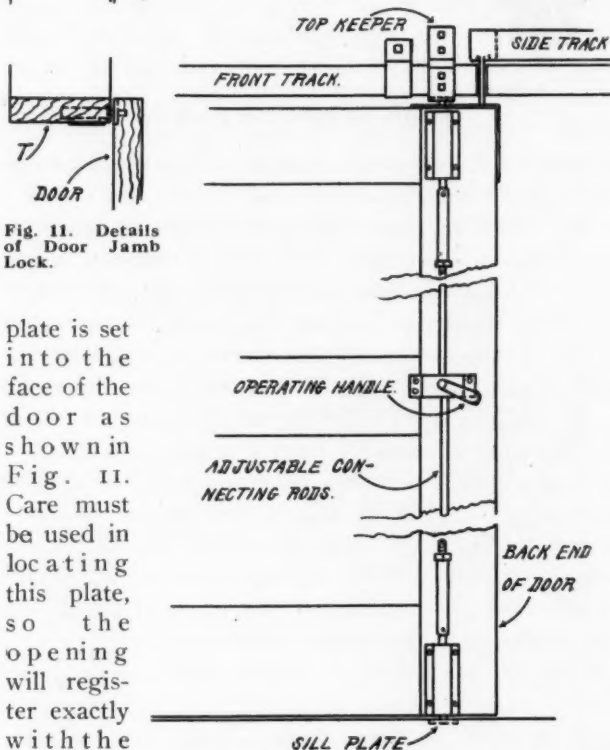


Fig. 13. Top and Bottom Bolt to Lock Door from the Inside.

plate is set into the face of the door as shown in Fig. 11. Care must be used in locating this plate, so the opening will register exactly with the keeper bolt when the door strikes the stop, *R*. Notice that this arrangement is just opposite to the customary practice of setting the lock into the door and attaching the keeper to the jamb. The door must lap the jamb at least 1½ inches.

On repair work, when old doors which do not lap the necessary 1½ inches, are to be rehung, a strip may be added to the edge of the door or a hinged hasp and padlock can be used to lock the doors (see Fig. 12). Set the hasp into the face of the door deep enough so it will be flush when folded, and attach the staple to the jamb. Hasps and padlocks are, however, not in keeping with the general tone of a garage (to say nothing of the chance of losing the padlock) and should

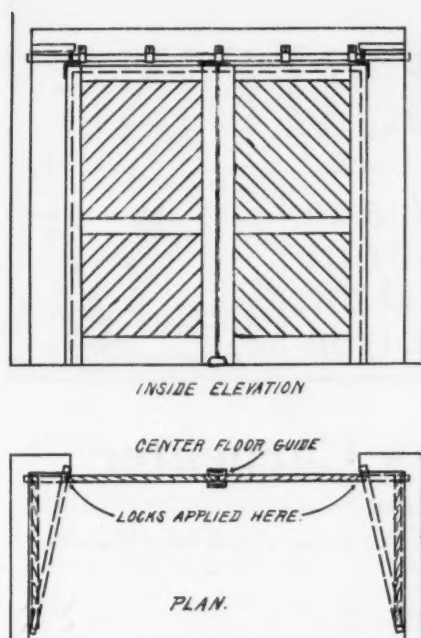


Fig. 14. Elevation and Plan of Pair of Right Angle Garage Doors.

to lock the rear end of the door against the jamb. The door must lap the jamb at least 2 inches. The handle of this bolt (see Fig. 9) is used in connection with a bow handle attached to the front stile of the door to move the door into open or closed position.

If provision for a 2-inch lap cannot be made, the door may be locked by attaching some of the many flush bolts, foot bolts or spring bolts to the bottom and to the top of the door. It will generally be necessary to provide a special keeper plate for the top bolt in order to avoid interference with the track and hangers.

Another suitable lock for the purpose is the top and bottom bolt (Fig. 13) in which the top and bottom bolts are joined by connecting rods to an operating handle at the center of the door. Special top keepers suitable for use with sliding door hanger tracks can be furnished with this bolt. The connecting rods are adjustable and are made in sizes to accommodate various heights of doors.

Right angle doors in pairs, as in Fig. 14, are locked in the same way as single doors, two locks being required for each opening. The bottom of the doors at the center are held in place by a center floor guide set into the floor. If necessary to lock from the outside, one of the doors should be bolted from the inside and the other door can then be locked from the outside with the mortise lock shown in Fig. 4.

Next Month Mr. Phillips will discuss some other locking arrangements for other forms of sliding Garage Doors.



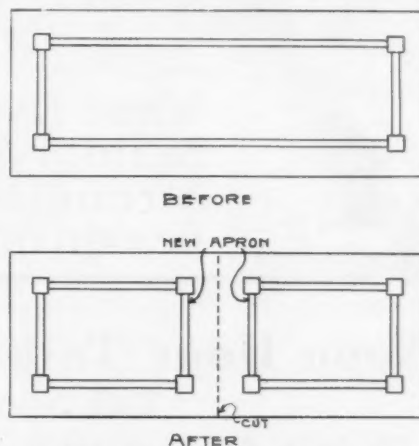
CUTTING UP TABLES. A mill man cutting two tables into four tables, the turner furnished the four extra legs, the mill man, or bench hand, put the two extra legs on, also the cross aprons, then sawed

not be resorted to except on the very cheapest work.

Two flush handle pulls should be used on the outside of the door; or if preferred, flush trap door rings may be substituted. Attach two bow handles to the inside of the door.

If the door is to be locked from the inside, use a parallel door bolt

the top in two. The man had been told by the foreman to knock the tops off and rebuild the tables. The way the bench hand did it was much quicker. Here is

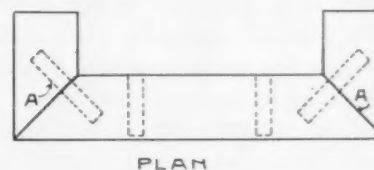


Views of Under Side of Table, Before and After.

a plan of the tables before and after, and looking from the under side.

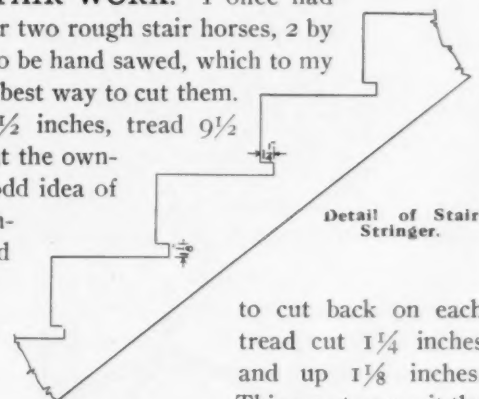
SO WIDE SHELF WON'T WARP. In making a mantel shelf with return ends mitered on is all right, but if the shelf board is wide, it will, if not very dry, shrink and open up inside corner.

If the shelf is two thicknesses, with a space between, as they are often made hereabouts, a good plan is to put a strong piece square across the joint, as at A, glued on—that is, between the top shelf and bottom board, which helps to hold the miter in place.



SECTION
Good Construction for Mantel Shelf.

ODD STAIR WORK. I once had an order for two rough stair horses, 2 by 12 inches, to be hand sawed, which to my mind is the best way to cut them. The rise $7\frac{1}{2}$ inches, tread $9\frac{1}{2}$ inches. But the owner had an odd idea of the notching. I had



to cut back on each tread cut $1\frac{1}{4}$ inches and up $1\frac{1}{8}$ inches. This was to permit the tread to run back $1\frac{1}{4}$ inches, as there were no risers—(outside stairs). I cannot see why this was done, unless those climbing these stairs had feet like a mason's hammer—as much sticking out behind as there was in front.

WM. C. JASBURY.



Noon Hour Talks by the Boss Carpenter

Talk No. 29—Simple Fink Truss

THE BOSS SHOWS HOW TO DETERMINE THE STRESSES DUE TO DEAD AND SNOW LOADS IN A SIMPLE FINK TRUSS

"DURING our first talk on trusses," said the Boss, "you will remember that steel roof trusses were referred to. Up to this time our problems have been wholly on timber trusses, or timber trusses with steel tie rods. Although your work is largely with timber, you may be called on at any time to supply the roof framework for a small shop where steel construction is specified, or you may be asked to examine such a roof and to report on its degree of safety. To do either of these things means that you will have to have a knowledge in regard to the common types of steel trusses similar to that which you now have in regard to timber trusses. That is the reason that our talk today takes up one of the most common types of steel trusses.

"The simple Fink truss shown in Fig. 22 is used on roofs where the distance between walls is from 20 feet to 40 feet. The height of this type of truss is determined mainly by the kind of roofing material which is to be used on the roof. The most economical height is one-fourth the span, or that of a $\frac{1}{4}$ pitch roof. The trusses should be spaced from 12 feet to 20 feet apart, center to center, for economical results.

"A truss of the type shown in Fig. 20 may be made up by riveting or bolting together steel angles of light construction, the area of the angle cross-section depending upon the amount of stress which the member is to carry. The smallest angle iron that is advisable for use in the bottom chord of a truss is one which has one

leg $2\frac{1}{2}$ inches long, the other 2 inches long, and a thickness of $\frac{1}{4}$ inch. Sometimes a 2-inch by 2-inch by $\frac{3}{16}$ -inch angle is used as a tie in some place of less importance. The upper chord may be composed of two angles placed back to back and securely riveted to plates placed between them at the ends, as shown. The bottom chord and main members may also consist of two angles, but the smaller tension members may consist of one angle.

"If the upper chord is subjected to bending between the joints, as in the case where purlins located at the joints of the upper chord are not used, a plate of steel extending the entire length of the upper chord is often riveted in between the angles. A truss of this type is very strong and light and has taken the place of the timber truss in many kinds of buildings.

"To find the size of the angles to be used in a truss of this kind, it is necessary to find the amounts and kinds of stresses in the different members.

"Fig. 23 shows an outline of the same truss shown in Fig. 22, and also gives a complete dead load stress diagram for the truss. The loads of 500 lbs. and 1000 lbs. shown at the joints of the upper chord are taken as such to illustrate the principles of the construction and not as representing any particular case. Of course, you understand from the talks given earlier, just how to find the actual joint loads in any case, if type of roof construction and kind of materials used are known. Talk No. 25 shows a detailed instance which may be used as an example, with the exception that the weight of the truss itself must be found from a new formula. A formula which is used to a considerable extent for

steel truss is $W = \frac{3}{4} a l \left(1 + \frac{1}{10} l \right)$, where W is the total weight of one truss in pounds, l is the distance between supports in feet, and a is the distance between centers of trusses in feet. This total weight is divided up among the joints of the upper chord. In determining the load for each joint, the two end joints are

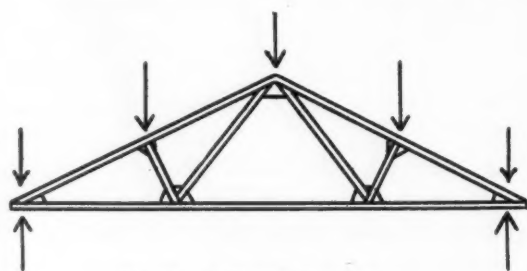


Fig. 22. A Simple Steel Truss.

counted as one, since in all of our diagrams we have used one-half as much load at the end joints as at the joints between the ends. In Fig. 23, we would divide the total load W by 4, using three of these parts at the joints where the 1000-lb. loads are shown and one-half of the remaining fourth load at each end where the 500-lb. loads are shown. Of course, the weights of the roof and covering should be added to these truss loads at these joints.

"After the loads at the joints have been found, and the outline of the shape of the truss drawn to scale, letter the spaces of the truss as shown and lay off the vertical load line. This load line is laid off to another scale as described in an earlier talk and extreme accuracy is demanded during this part of the construction. The load, ab , is a half load as described, while all other loads down to ef are full loads. The load ef is then laid off as a half load. The point, g , representing the ends of the two supporting forces, fg and ga , is located in the middle of the load line.

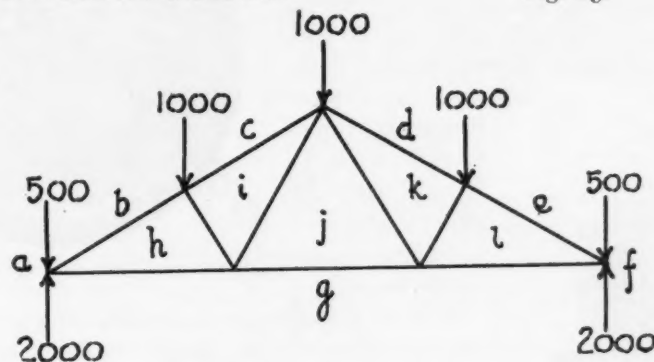


Fig. 23. Dead Load Stress Diagram for Simple Fink Truss.

"To find the stresses in the members, first draw the line bh parallel to the member bh in the truss, and draw gh parallel to the member gh . Where these lines meet determines the location of the point h . As in previous problems, the lengths of the lines bh and gh when multiplied by the scale used in laying out the load line will give the stress in pounds in these members.

"Next, draw ci and hi parallel to the members ci and hi of the truss. Where these lines meet will determine the location of the point i . Then draw ij and gj in a similar manner. Draw dk and jk , el and kl , and gl will be easily seen. Note that the two points h and l fall together, due to the symmetry of the figure and equality of the loading.

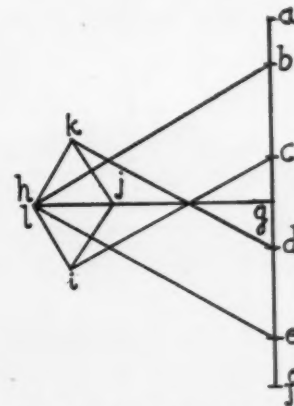
"Each of these lines should be measured carefully and reduced to pounds, as in the case of bh and gh . A table should be prepared similar to that shown in Talk No. 27, and the stress in each member entered.

"By Bow's notation, we see that the force in the member bh , when the order of the letters is read right-handed about the end joint, acts downward towards the left, or towards the end joint. This indicates that the stress in the member bh is compression. Likewise

with the member hg . The order of the letters reads over towards the right in the stress diagram. Therefore the stress in the member hg acts over towards the right, or away from the end joint, thus indicating tension in the member. If all of the other members of the truss are examined the stresses will be found to be as follows:

bh compression	hi compression
ci compression	ij tension
dk compression	jk tension
el compression	kl compression
gh tension	ig tension
	lg tension

"The stresses due to the snow load would be found by a diagram similar to Fig. 23, using the snow load on the roof instead of the weight of the truss and roof construction. The description given in Talk No. 27 and relating to Fig. 17 shown in that talk will serve as a guide in constructing the snow load diagram. The general shape of the diagram will be the same as Fig. 23.



"The stresses due to the wind load may also be found by a method similar to that shown in Fig. 18, Talk No. 27. The general method of procedure to be used will be similar to that explained in that talk, but the shape of the stress diagram will be a little different. You should meet no difficulty in constructing these diagrams for yourself with these general principles as a guide.

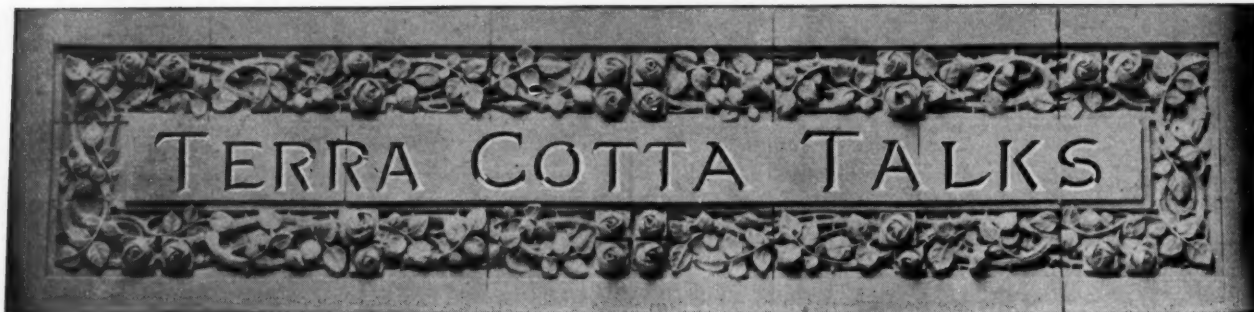
"Next time," said the Boss, "I will show you how to find the stresses in another type of Fink truss. In this next case we have an instance where there are more than two unknowns at a joint. This will need a different kind of treatment."

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THAT losing a tool or knife for some time, so that it will take on rust, improves the steel, is no fable. I had a few wood-turning tools given me, that had been mislaid for years. They were pitted with rust and yet they were certainly A1.

A good way to lag up, or increase the diameter of a pulley on a shaft is to wrap a leather belt around it and rivet the belt to the flange of said pulley. This also keeps the belt from slipping when leather is against leather.

WM. C. JASBURY.



Terra Cotta for Bank Buildings

FULL PAGE PLATE OF LATEST BANK FRONT DESIGNS

BANKS are the pride of the populace, and the model for business building improvements in every wide-awake and growing small city or town. They are the first buildings pointed out to strangers making their first visits. Relatives and friends point with pride to these solid financial institutions and mention the millions on deposit in the savings department of their favorite home institution. It is but fitting that the latest and most attractive of

tained that were suitable to use in bank structures. American architects and manufacturers, however, are always bringing out improvements. Architects have labored with different building materials to give to bank structures a distinctive, solid, imposing front, in accord with the position such buildings occupy in the town.



A Popular Medallion for Bank Work.

It seems that terra cotta lends itself a little better to the proposition than any other building material. There is something about the clean white appearance of terra cotta that is pleasing when used for ordinary store or business block. For banks it may be used to advantage for the whole front.

When ordering terra cotta pieces, if necessary, special designs may be added, such as raised or incised letter pieces, giving the name of the bank, date of building, name of the street or street number, etc.

Note the details of construction in the accompanying plate. These show approved practice for tying.



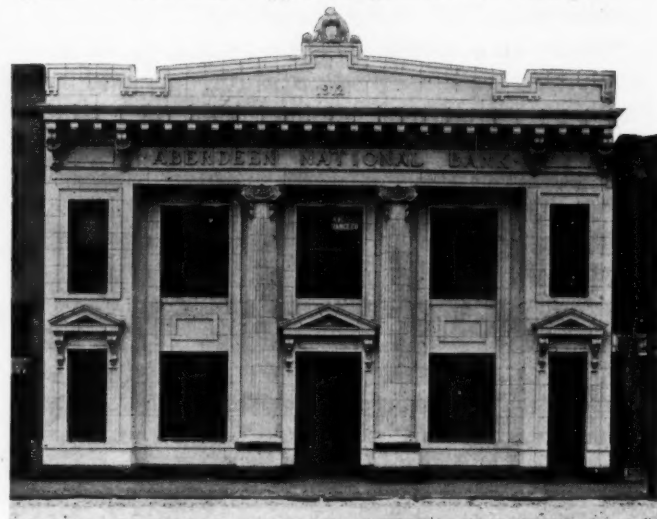
Modern Bank Front at Des Plaines, Ill.

all decorative building materials should be used for bank building.

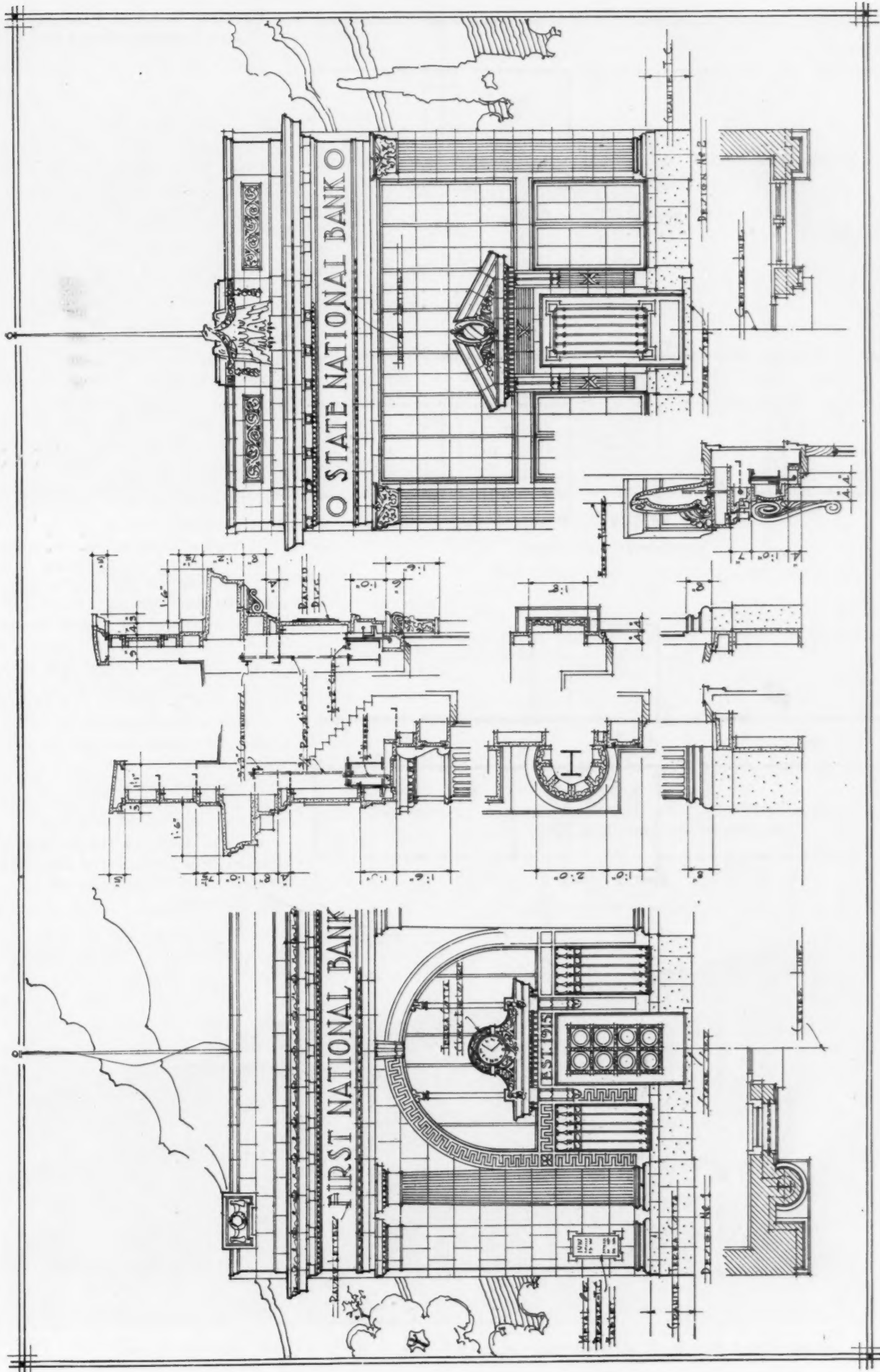
Gleaming white terra cotta for bank buildings is one of the newer propositions in building. The accompanying plate of details, showing the elevation of two bank fronts, illustrates how terra cotta may be used to advantage for this purpose. Nothing could be more effective than these terra cotta facades for bank buildings.

These decorations are all selected from stock pieces. It is noticeable that stock patterns of terra cotta for the outside of public buildings is coming into use more every month, because terra cotta may be easily kept clean and is dressy in appearance. It is especially well adapted for fronts of bank buildings.

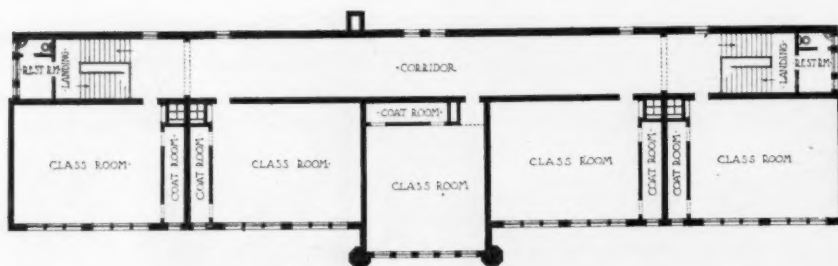
It is only recently that stock patterns could be ob-



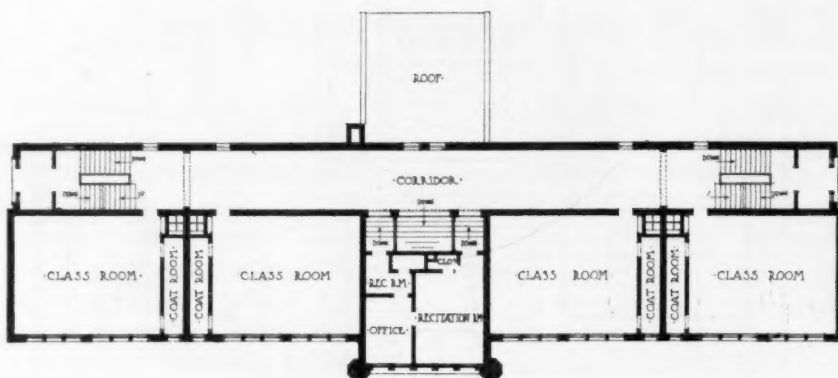
Aberdeen, S. D., National Bank; Front White Terra Cotta.



Designs of Two Modern Bank Building Fronts of Terra Cotta. Details Illustrated by Courtesy of the Midland Terra Cotta Co.



Arrangement of Second Floor.



Arrangement of First Floor.



Arrangement of Ground Floor.

Cicero School Planned for Future Growth

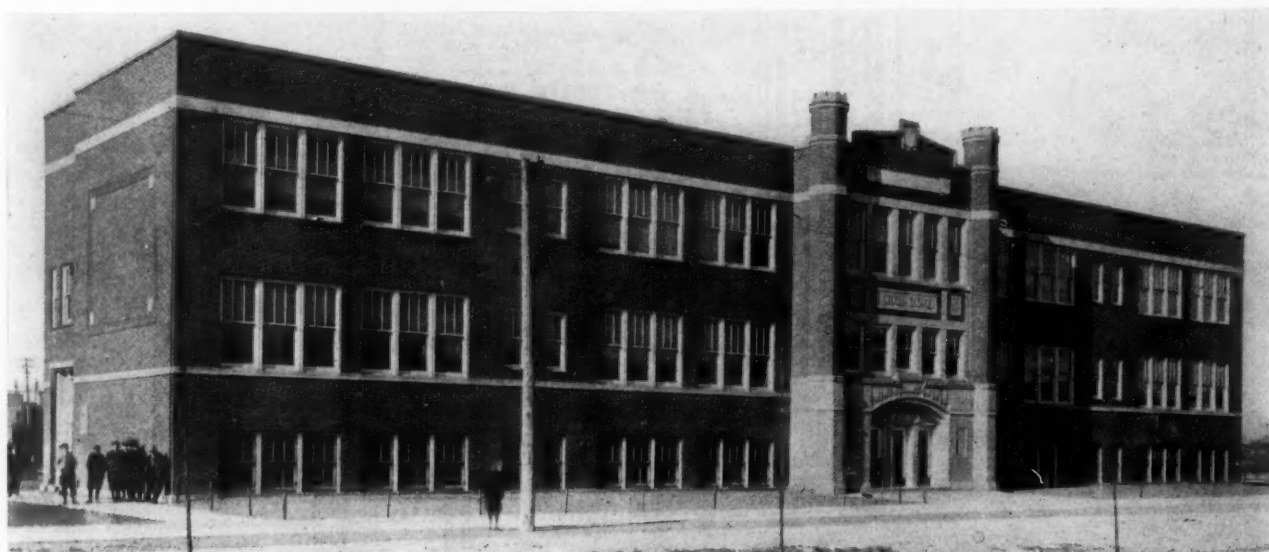
Cicero is one of the suburbs lying just outside of the Chicago City Limits to the west. It is a section that has had phenomenal growth, and there is every reason to believe that this growth will continue. Cicero proposes, moreover, to take good care of the rising generation. She boasts a number of the most modern sort of school buildings, and a number of them are interesting from the fact that they can be doubled in size at some later date without lessening the architectural beauty or convenient arrangement of the buildings.

The new Cicero school illustrated is of this sort. The architect has designed a building with very wide frontage but only one room deep. Along the rear of the building on each floor extends the main corridor. Later a second row of rooms will be added, exactly doubling the capacity of the building.

This school house is a good example of present day planning. Extra generous window space is the dominating feature. In every classroom the light all comes from one way, this being the easiest on the children's eyes. Cross-lights are bad and are avoided by the best school architects.

The exterior walls are of dark brick laid with contrasting mortar joints. Considerable cut stone trim is employed, this being Indiana limestone. The architectural interest centers around the main entrance with its heavy corner buttresses in tower effect. The remainder of the building is plain. Nothing about it to become dilapidated with time.

The floor plans show the well-lighted basement floor given over to vocational training and the two upper floors to nine class-rooms.



School Building Recently Built at 49th Ave. and 23rd St., Cicero, Ill. G. W. Ashby, Architect, Chicago, Ill.



New Advent Christian Church at Aurora, Ill. Designed by A. W. Woods, Architect, Lincoln, Nebr.

A Modern Church Design

The accompanying floor plan and design show a modern church, both in price and arrangement. It is of a type that is being quite generally adopted because of its neatness and simplicity of design, both in exterior and interior, yet presenting a most pleasing effect for the amount of money invested. Every part is put to some use and speaks well for the architect, Mr. A. W. Woods, of Lincoln, Nebr., who has planned many churches in the last few years.

This church was designed for the Advent Christian Denomination at Aurora, Ill. It has an East and North front with two entrances at the corner with but five stone steps to the entry floor, from which a wide flight of stairs leads to a corridor on the main floor. Also there is a closed stairway leading to the basement, which is well arranged for social purposes, as well as for the other rooms that go to make up a convenient and well arranged church.

The main floor is bowled, as indicated by the dotted lines, with an incline of $\frac{5}{8}$ of an inch to the foot.

The organ and choir are placed just back of the rostrum and on either side are the pastor's room and choir room, with openings direct to the rostrum. There is also in connection with the rostrum, a baptistery, which has a cover on rollers that can be run back under the choir floor and is entered direct from the above named rooms. By using screens, the candidate can enter the baptistery before coming in view of the audience.

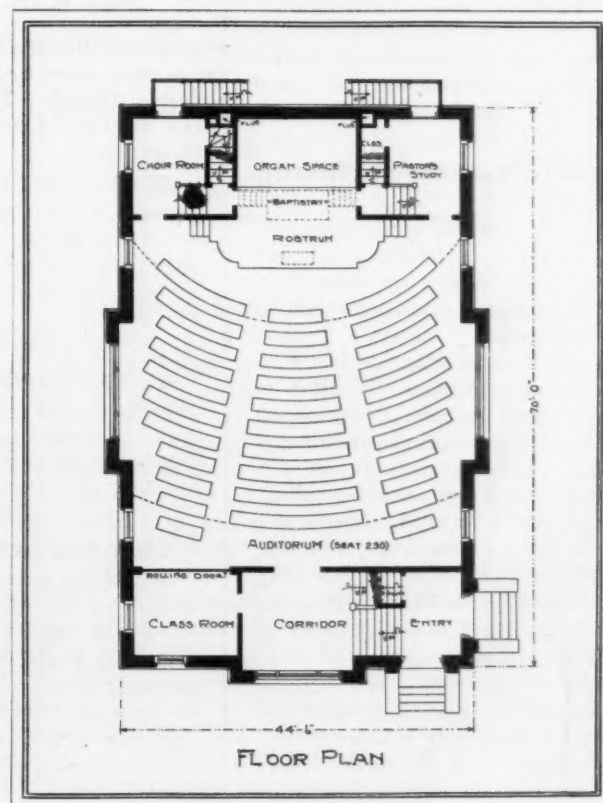
From the choir room there is a stairway leading to the basement. Above these side rooms are other rooms that can be used for class rooms.

A rest room is provided in the front end with opening off the corridor and separated from the main room by a rolling partition. Above this room and the corridor is a gallery, which

furnishes accommodations for about ninety sittings and are as good as any in the house.

Every part is well lighted and ventilated. There are three large art glass windows besides a number of smaller ones aside from a large art glass skylight over the center of the auditorium, which is protected by a regular storm skylight.

The roof is of the business block type and may be covered with tin, gravel, asbestos or any of the composition roofs.



Arrangement of Main Floor of Aurora Church.

CORRESPONDENCE



Questions Answered and Ideas Exchanged.

Our Readers Are Requested and Urged to Make Free Use of These Columns for the Discussion of All Questions of Interest to Carpenters and Builders.

Come on in, the Subscribing is Fine

To the Editor:

Williams, Iowa.

This is a photo of a cozy little residence I completed last July. It is an eight-room house, size 28 by 32, with 12-foot



Eight-Room House, Size 28 by 32 feet, Built by F. C. Mason.
Williams, Iowa.

quires considerable attention, as it quickly becomes dirtied and stopped up. Then it is necessary to take all the filtering material out and thoroughly cleanse or renew it.

Some claim that a settling tank is better than a filter. The rain water goes into the settling tank and after it has settled, the top half which is clean, pure water is drained off into the cistern proper.

EDITOR.



Questions for Slate Roofers

To the Editor:

Memphis, Mich.

I have a contract for a slate roof. The architect specifies, "All slate to be bedded in elastic cement 3 feet from gutters and 1 foot each way from hips, valleys and ridges."

Is slater's felt left off where cement is used, or not? How much cement is left between slates? Are the slates pressed down until butts of slates touch course underneath?

I would like to know the proper way to do this part of the work.

B. D. CANTINE.



Mortar on Pressed Brickwork

To the Editor: Factoryville, Pa.

I built a house last summer in which there is a fireplace, the front of which is constructed of red pressed brick. The mason in building same was negligent, and spattered the face of the bricks and hearth with mortar. How can I remove the spots?

HARRY W. SEAMANS.

Answer: We believe that the following method might be of service to you as it has proved successful in other cases.

Wash the brickwork with a muriatic solution mixed in proportions of $\frac{1}{4}$ -pint acid to each gallon of water for every 100 square feet of surface. When dry, work is brushed down with kerosene oil, and this is followed by a coating of linseed oil. If the stains prove obstinate, a wire brush or a stiff fibre brush may prove of service in loosening the mortar, care being taken not to scratch the brickwork unduly.

EDITOR.

The Bulletin Board

Practical illustrated articles wanted from men who know what they are talking about. The Editor particularly invites Contributions on the following:

STORE FITTINGS—I would like to suggest that some illustrated articles on Store Joinery and Fittings would greatly increase the value and usefulness of your already excellent journal.

C. A. LAPHAM,
Kamloops, B. C., Can.

BRICK MASONRY—Your magazine would suit me better if it were called Carpenter and Mason Builder. See if you can give a corner to us mason builders.

WILLIAM C. TAYLOR,
Fishkill on Hudson.

LOW-COST SLEEPING PORCH—I have to erect a kind of sleeping shelter on top of a high building. It should be large enough to accommodate one single bed, and protect the occupant from rain, violent wind and mosquitoes. Could you give me a working plan of such an erection, the cost of the necessary materials to be as low as possible?

S. HAMMOND,
Jacksonville, Fla.

studding.

I enjoy reading the AMERICAN CARPENTER AND BUILDER and think every live contractor and builder should be a subscriber.

F. C. MASON.



Cistern Water for Drinking

To the Editor: Dayton, O.

As I am building a home, I would like to get some information in regard to how to filter rainwater so it is all right for drinking water.

JESSE E. BETZ.

Answer: Rain water is often used for drinking purposes, though it is not so good as pure spring water. If the water is caught on a clean roof and is stored in a clean cistern it makes fairly good drinking water. There should be a Y-valve in the down spout so that the first water, which is always more or less dirty from having washed the shingles, may be diverted and not allowed to go into the cistern.

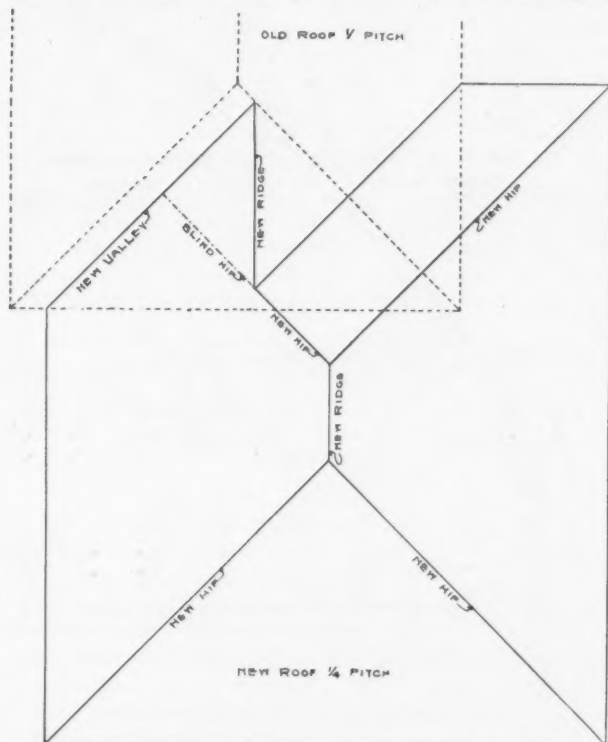
Cistern water filters are made by filling a box with clean sand and gravel and possibly a layer or two of charcoal. All the water is supposed to pass through this box before entering the cistern. Such a filter re-

Joining One Pitch to Another

To the Editor:

Springfield, Ill.

I am sending a sketch of a roof which I ran up against in remodelling and building an addition to an old house. I framed everything on the ground with the exception of the bottom cut of short new hip at x to rest on sheathing of



Roof Plan that Requires Some Figuring.

old roof. I located the point where the hip and valley met, knew the length of the hip, but could not get the bottom cut by any rule I knew. Would like the assistance of some of your expert help.

HENRY C. REUTSCH.

Answer—There is no need of going into a long detailed explanation of this problem. It is one of the things that looks hard but is not. It is simply the joining of one pitch to another; and knowing the figures to use for the separate pitches, it is only a matter of combining the two to get the required result.

First, lay off the seat of the new rafter but, instead of the new rafter, instead of cutting it, apply the square to this line with the figures that give the seat cut to which it joins; and this will give the required seat cut to intersect the old roof. But there must be another cut across the top of the rafter; and if you stop and think a minute, it will be seen that it is simply the same as what is called the

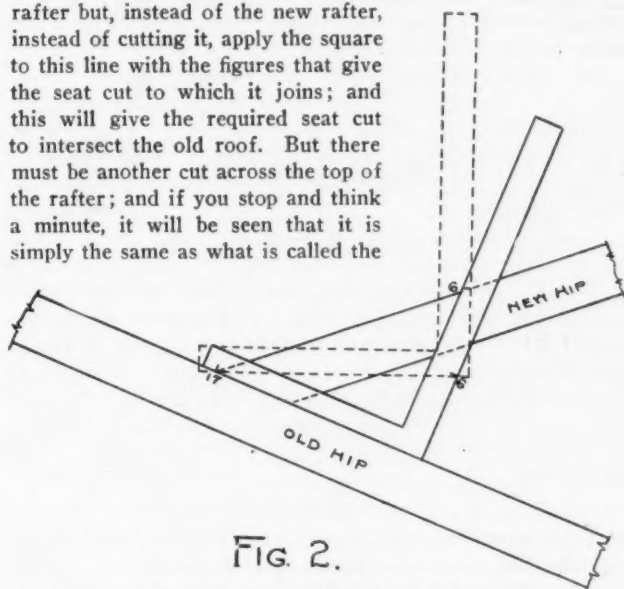


FIG. 2.

Getting Rafter Cuts with Steel Square.

the side cut of the hip. Suppose the new hip rafter had intersected the ridge instead of in the plane of the roof, it would have simply been a combination of plumb and side cut and Mr. H. would have made it and thought nothing more about it; but as his hip intersected the roof below the ridge, he became befuddled and gave it up as a hard one to crack.

It must be remembered that the new hip intersects the old roof at the same angle as the old hip rests. The figures that give its seat cut must also be used in connection with the figures that give the seat line for the new hip. In this case, the two pitches being the same, like figures are used.

Fig. 2 shows the application of the square to the side of the new hip rafter to obtain the seat line, 17 and 6 giving the line; and the old roof being of the same pitch, the same figures are applied to this line to obtain the required cut across the side of the rafter. The top cut being the same as at the ridge, 17 and 18 1/4 will give it, the latter giving the cut.

Mr. V. A. Pleasant will also find in this an answer to his problem, although of different pitches, the formula remains the same. But he will find that he will have a hump at the old ridge.

A. W. WOODS.

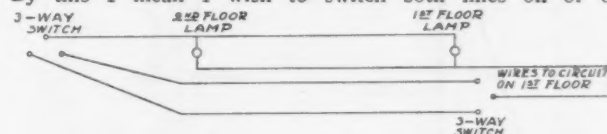
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Arrangement of Hall Switches

To the Editor:

Malta Bend, Mo.

I have a little problem in electric light wiring which I cannot solve and I would like your aid. I have a light in the lower hall of residence, also one in the upper hall, both of which I wish to operate with flush switches on each floor. By this I mean I wish to switch both lines on or off



WIRING DIAGRAM FOR FRONT HALL
LAMPS ON TWO FLOORS UNDER CONTROL FROM EITHER FLOOR
Wiring for Three-Way Switches.

from either floor, the switches being interconnected and each working independently of the other. Will you kindly show a diagram of this wiring and also state whether a three-way switch or four-way switch is necessary?

DAN J. KIEL.

Answer—We believe that the diagram shown will explain itself. You will notice it is possible to control both upstairs and downstairs lights from a three-way switch, one located on each floor.

EDITOR.

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Framing Roof for Round Barn

To the Editor:

Salem, Ind.

I have a round barn to build, which is 58 feet in diameter. It is to be a perfect circle. What is the best way to frame the roof so as to be self-supporting? I thought of building up a circle 10 feet in diameter for the top, made of 1-inch by 5-inch nailed together, and building the ventilator over this. Then build up the purlins in the same manner. If I did this, would it be best to build it on the ground or scaffold up and build it in place? There will be a silo in the center, but it will not reach to the top.

O. W. BOWERS.

Answer: If a gambrel type of roof is desired, a band built up of 1-inch boards can be supported on 2 by 6 studding placed on top of the silo. This band will serve as a support for the upper ends of the rafters and for the ventilator which you wish at the top. The purlins should be put in place after the side walls are in position and after the mow floor has been placed. This purlin could be built up from 1-inch thick boards using this mow floor as a support during building; then raised to place and supported from the mow floor.

EDITOR.

Sound-Proofing a Wall

To the Editor:

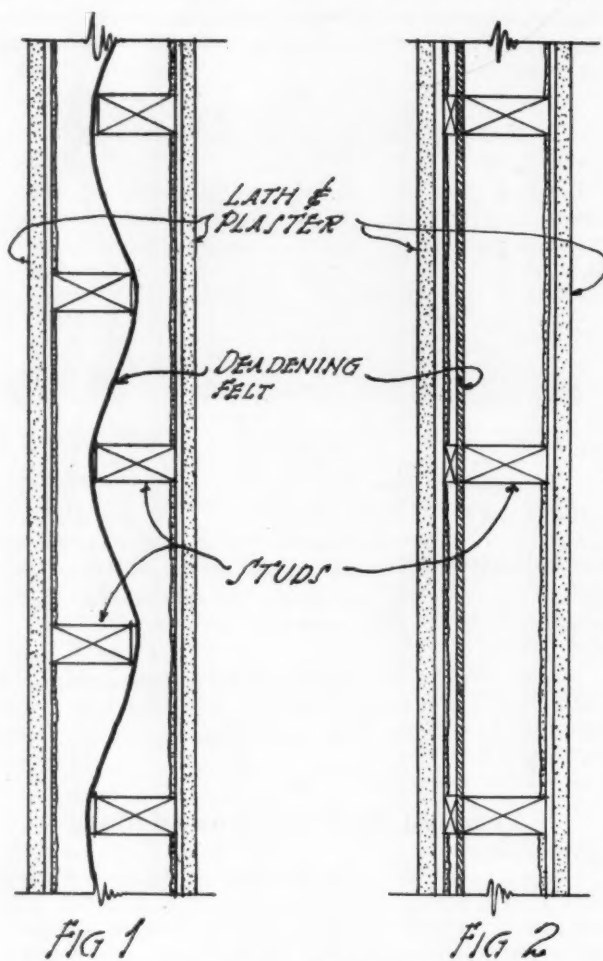
Brooten, Minn.

I will thank you for any information you can give me—how to take up sound in a certain sized hall, that is, how to prevent ordinary loud talking from being heard through a 6-inch wall of 2 by 4 lath and plaster.

The hall referred to is 28 feet wide by 50 feet long, 12 ft. ceiling, 3 outer walls of 12-inch brick, partition wall 6-inch, plastered on both sides. Ceiling is steel. By standing outside of this 6-inch wall ordinary talking can easily be heard and understood. Is there any way to fix this echo or whatever it is? Would tightly strung fine wire across the room near the ceiling have any effect?

L. L. LOBBEN, Agent
H. W. Ross Lumber Co.

Answer—The only remedy to make your wall more sound-proof is to remove the lath and plaster on one side of the wall and follow out the instructions illustrated in our Fig. 1.



Two Schemes for Sound-Proofing a Partition.

We are showing two common methods that are usually employed to prevent the passage of sound through a frame partition.

We believe the method in Fig. 1 is the more effective. In Fig. 1, the wall will be increased to eight inches, adding an extra 2 by 4 studding, which will be set out two inches farther to avoid contact with other wall. Our Fig. 2 is a little less expensive and would take up less space, but will not be as nearly effective on account of the 1 by 2 battens being nailed to the 2 by 4 studs.

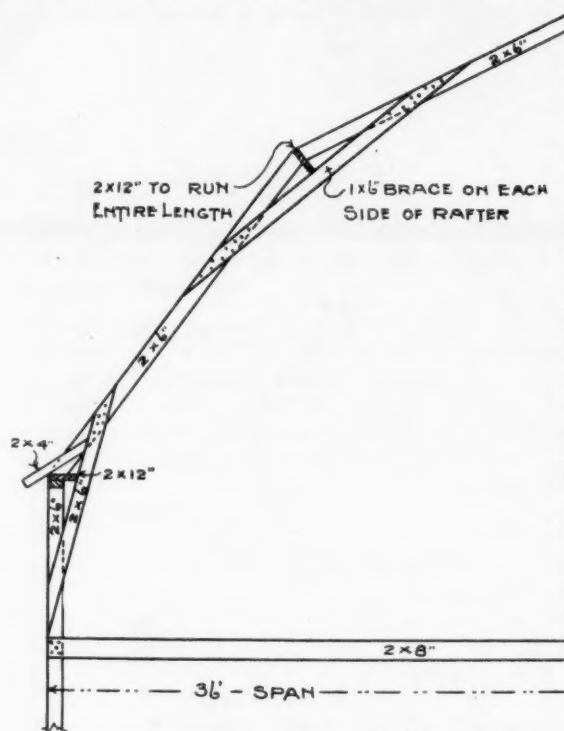
The custom of stringing wires across the room to carry away the sound has proven worthless. A half-inch plaster coat of asbestos stucco is best for killing echos. EDITOR.

Gambrel Roof Construction

To the Editor:

Pisgah, Iowa.

I have been a subscriber to the AMERICAN CARPENTER AND BUILDER for some time and take great pleasure in the different articles and letters sent in by the subscribers. Have noticed



Construction for 36 ft. Span Gambrel Roof.

in almost every issue a different method of framing a gambrel roof, of the self-supporting type. I take great interest in reading these and every opportunity I have to see a roof of this kind, I examine them to see how they are constructed. While I am no authority on roof constructions of this kind, having built only three of them, I am sending you a drawing of one which I saw on my Uncle's farm in South Dakota.

This barn has a span of 36 feet and is braced in the manner shown; it stands well against the heavy winds and carries a track and hay slings. Do not know as I have the lines and measurements exactly correct, as I did not have the proper instruments to do this work with, besides I am no architect, just an every day carpenter. I would like to hear from some of the brother carpenters of better authority as to what they think of this style of bracing.

HERBERT ROSE,
Contractor & Builder.



Moisture in Air

To the Editor:

Creston, Iowa.

I am interested to know something about the condition of moisture in the air in rooms heated by hot air, steam or hot water. Some tell me that each of these methods furnish a dry heat, while others say that with hot water no moisture comes into the rooms from the pipes, while with a furnace the moisture comes in from the water pan. Some of the best furnaces claim to be free from this trouble if the water pan is full. Is there any way of increasing the humidity in rooms heated by furnace heat except by means of the water pan?

CLINTON BROWN.

Answer: The matter of humidity in the air is one which can be controlled to a considerable extent. In a hot air furnace the water pan, if kept full, should give a sufficient degree of humidity, especially where the cold air duct leads

directly from the outside air to the furnace.

In case of steam or hot water, the humidity will be furnished by hanging a tank of water on the back side of the radiators. This tank is not exposed to view, and the heat from the radiators will evaporate a considerable amount of moisture into the air.

We do not know of any other means of supplying moisture direct to the air that would be of service in the ordinary residence. Where a blower system is used, this point is not so difficult, since the warm air may be blown through the moistening chamber.

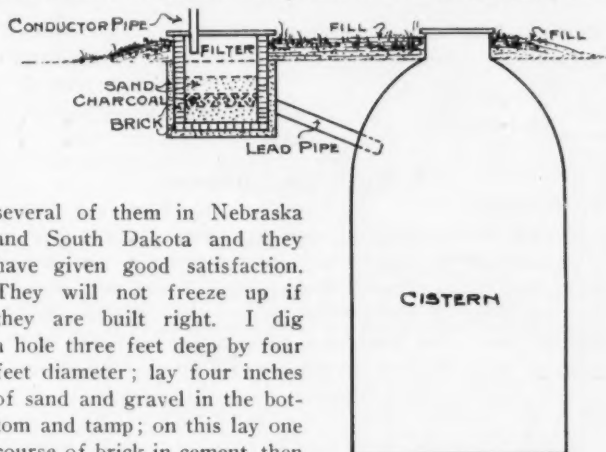
EDITOR.

Cistern Filter

To the Editor:

Sweeny, Texas.

In looking through the *AMERICAN CARPENTER AND BUILDER*, I find in the May and September numbers a request for some ideas of how to build a cistern filter. An answer was given, and I desire to submit a way that I have used. Have built



Arrangement of Cistern and Filter.

several of them in Nebraska and South Dakota and they have given good satisfaction. They will not freeze up if they are built right. I dig a hole three feet deep by four feet diameter; lay four inches of sand and gravel in the bottom and tamp; on this lay one course of brick in cement, then lay the bricks in the wall the four-inch way, leaving about four inches of space between the brick and dirt wall and fill this space with sand and fine gravel. This will keep the brick wall from bursting in at a temperature of 42 degrees below zero, which has been proven. About four to five inches up from the bottom, put in a lead pipe to the cistern; four inch tiling is all right for this purpose. A screen should be put over the filter end. The walls should extend a little above the ground and have a tight cover to keep out insects.

The filter should be filled about eight inches with clean sand and gravel and on top of this place about six inches of charcoal; then about the same amount of sand and gravel again on top of this; and it is completed. A filter of this kind does not need cleaning more than once in a year or two, depending on the character of the locality. The space under the lead pipe catches the settlements and can easily be cleaned by taking out the sand and charcoal and washing it and replacing again.

ARTHUR E. ENGBERG.

Wants to Clean Marble

To the Editor:

St. Peter, Minn.

I would like some information regarding cleaning plaster from marble. We have been doing some repair work on a building and put in some marble base on old plastered walls. In finishing plaster to base some of the putty coat got on the marble. This was washed off as soon as possible, but I find that the lime stain keeps showing up white. We are using a Minnesota product of marble from Kasota, Minn. It is a limestone product with a polished finish. I have washed it with a strong suds of Gold Dust washing powder. It seems to wash clean, but in an hour afterwards the white comes out again. Would thank you very much for any information.

JOHN PECK.

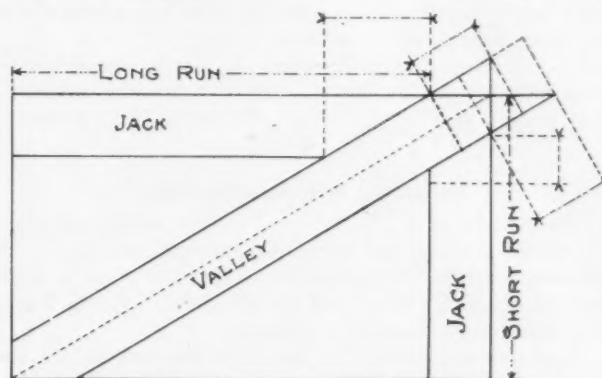
A Simple Diagram for Cutting Rafters

To the Editor:

Richland, N. M.

Have you any simple method of obtaining cut and length of valley rafter and jack cuts where two different pitches come together in a valley? Guess I can figure it out but with much difficulty

A. O. YOUNG.



Simple Diagram for Cutting Rafters.

Answer—We have answered this question a number of times, both on and off of the square; but for simplicity we know of no better way than the accompanying illustration, as it requires no mathematical calculation beyond a carefully laid out diagram.

First, lay out a parallelogram to a scale, say one inch to the foot, with the two runs for its dimensions. In this, lay off the valley and the two jacks full thickness and square out, as shown. The distance apart of the arrow heads represent the vertical distance the plumb lines should be laid off on the side of the rafter. These lines should be carried clear around and then cut diagonally across the back from one side to the other.

This applies to any pitch the rafters may have as the plumb lines will always remain same distance (vertically) apart regardless of the pitch.

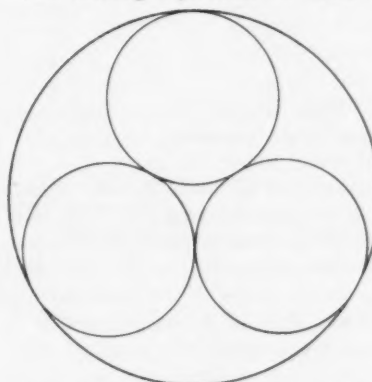
A. W. WOODS.

A Problem to Solve

To the Editor:

Glenburn, Calif.

Am sending a problem for some of the readers to solve.



Diameter of Large Circle is 12. What is Small Diameter?

If the larger circle is 12 inches in diameter, what is the diameter of the smaller circles?

Although I am running a flour mill, I enjoy reading the *AMERICAN CARPENTER AND BUILDER*. Think it a fine paper.

J. A. JACK.

Placing Hot Water Heating Pipes

To the Editor:

Pineville, Ky.

I would like to have some information on installing a hot water heating plant. Is there any reason why the risers and pipes to the second story should not be concealed in the walls and run across between the joists of the second floor? Would it be detrimental to the heating plant to run the pipes next to the outside walls in a frame building that is storm

sheathed and covered with heavy building paper before the siding goes on?

F. J. UNDERWOOD.

Answer: It is customary to run both hot water and steam heating pipes concealed in partition walls. Also the pipes may pass between the joists of second floor providing they do not extend within 4 inches of any woodwork. These pipes should be fitted with loose tubes and iron plated where they pass through any woodwork.

We believe that a great amount of heat would be lost if pipes were run in any outside wall of a building, especially if of frame construction.

EDITOR.



Helping the Carpenter

To the Editor:—

Seattle, Wash.

I submit a sketch and test for a practical problem, which oftentimes confronts the carpenters: How to draw a circle segment, A, B, C,—Fig. 1. When the chord A C and height D B are given. Proceed as follows:

On the stock of which to make the segment, lay off the chord A C and at the middle point, D, erect D B perpendicular. Drive nails at A B and C; make a triangle of wooden strips, as indicated on the figure, to fit close to the points, A, B, C,

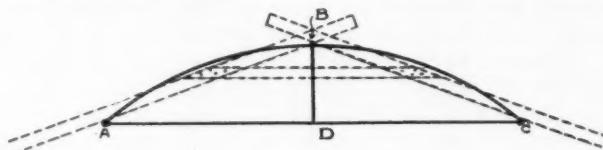


FIG. 1.

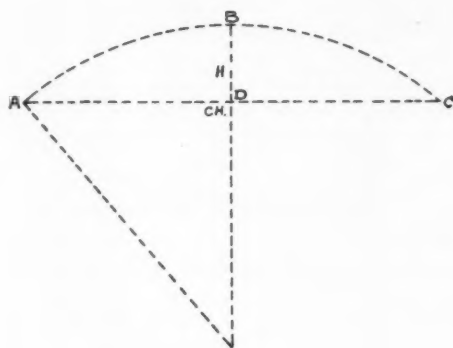


FIG. 2.

To Lay Out a Circle Segment.

with the vortex at B. Care should be taken that this triangle thus made be rigid so as to keep the angle at B constant, because thereupon lies the whole secret of the truth.

Since these preparations are done, pull out the nail at B and with a pencil at this vortex and with the sides A B and B C kept in touch with the nails at A and C, swing the triangle about. The pencil will trace the required circle segment, A, B, C.

Above described way of drawing a circle segment is founded on the geometrical truth that angles at the periferii of a circle subtended by a chord are equal. If the chord is a diameter, the angles are right angles. Hence the proposition to draw a circle with the steel square when the diameter is known.

When radius R, the chord Ch. Fig. 2, are given and the height, H, is wanted, then the numerical value of H can be computed by the formula:

$$H = R \pm \frac{1}{2} \sqrt{(2R + \text{Ch.}) (2R - \text{Ch.})}$$

The radical to be subtracted when the segment is less than a semi-circle.

K. A. WESTHOLM.



\$2000 Country School

To the Editor:

Grayville, Ill.

I submit photo of a school house we built last year near this city. For a country school we think it is a model. It cost about \$2,000 complete.

I like the correspondence part of your magazine better than anything else, for through these particular columns I get so many different ideas, from all parts of the continent.

BARRETT BROS.,

Contractors and Builders.

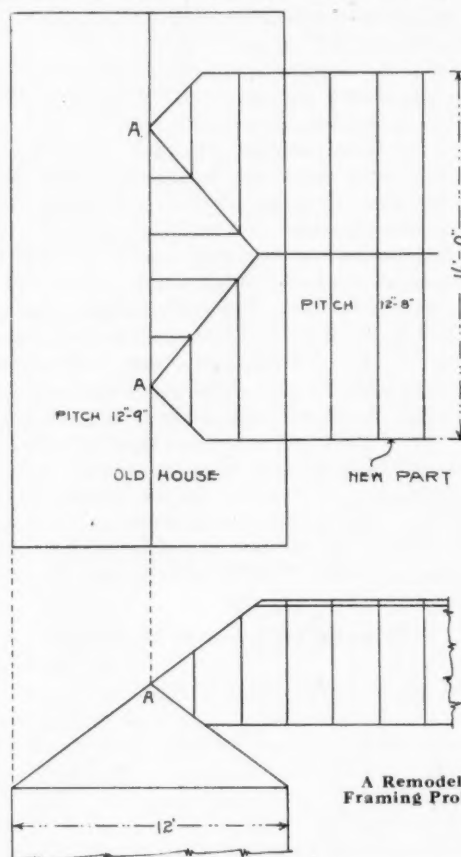


A Kink to Unravel

To the Editor:—

Cleveland, Okla.

Having been a reader of your paper for a number of years, I am sending in a problem in roof framing I ran into the other day. Am willing to own up that it bested me and would like for some of the Brother Chips who read the Builder put me wise. Am sending a plan of the roof and what I want to know is how to get the cut on the hip rafter at



A Remodeling Framing Problem.

"A"; the rafter sits on the sheathing of the old house. As you will see by the plan, the old roof was cut on 12"-9" and the new one on 12"-8". I got the roof up all right, but must confess I had to resort to the old "cut and try" method to get the lower cut on the hips.

V. A. PLEASANT.

Two Good Colonnade Designs

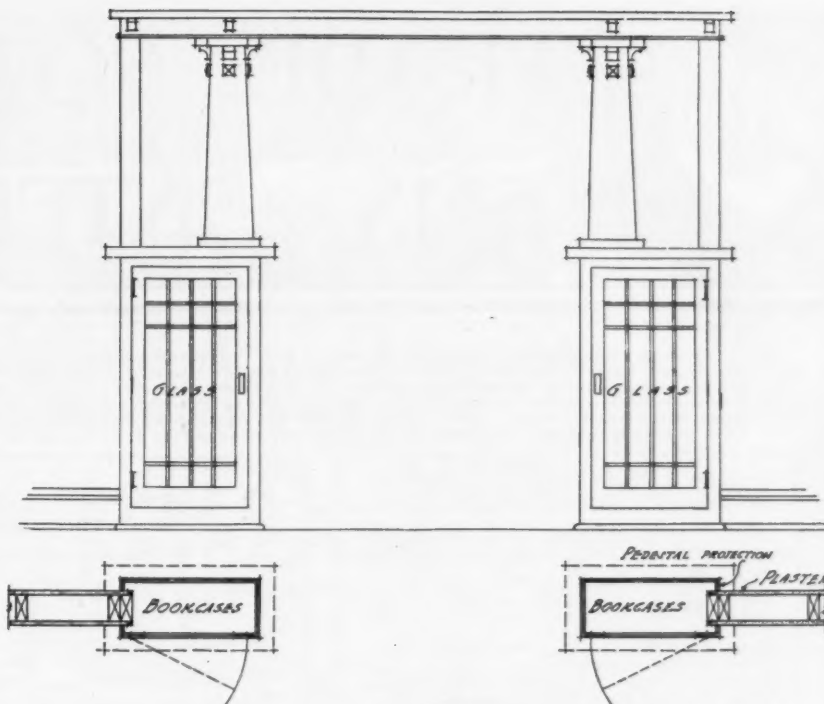
To the Editor: Mattawan, Mich.

I wish you would send me an illustration of how to put in a colonnade, showing how to finish the pedestal where it meets the wall. Often pedestal is wider than the wall, and I am in doubt about the proper finish from an architectural point of view.

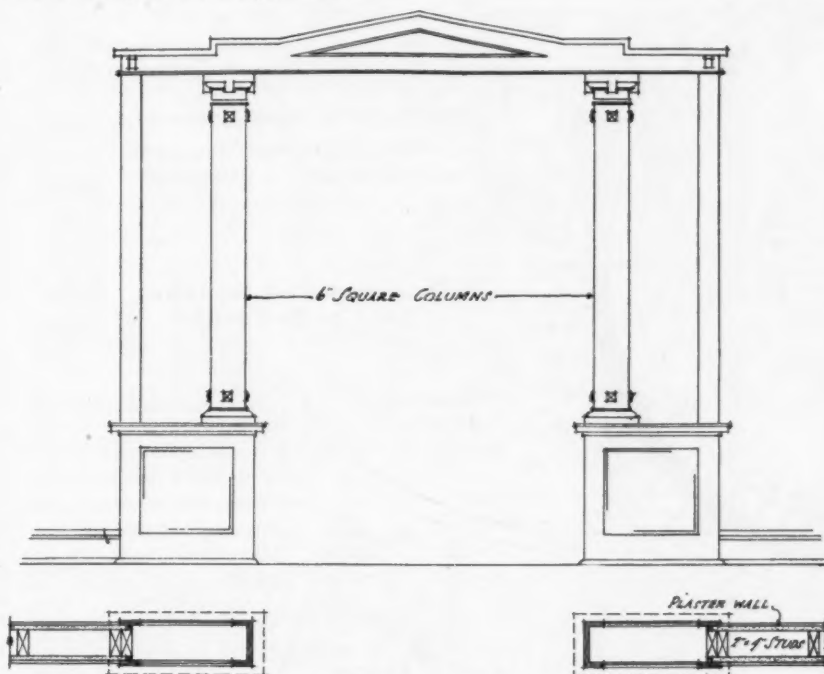
C. E. TUTTLE.

Answer—Herewith are two sketches showing approved ideas for colonnade designs. You will notice in the first the pedestals are wider than the partition wall. The pedestal trim is carried past the line of the opening a distance equal to the projection and is then returned against the plaster. In this design the pedestal space is utilized as a bookcase. A glass door swings on one side and the other side is a flat panel.

The other design is more simple and less expensive. The pedestals are not so wide. In fact, the pedestal proper is the same width as the stud partition. A flat casing covers the joint as for an



Detail of Colonnade Featuring Book or China-Cases in Pedestals.



Detail of Neat Inexpensive Colonnade Opening.

ordinary cased opening, but the projecting cap mould is returned against the plaster with a miter joint in the regular way.

Colonnade openings of this type add much to the attractiveness of the modern residence. They are well worth the slight extra amount they cost.

EDITOR.

Raising Barn Rafters

To the Editor:

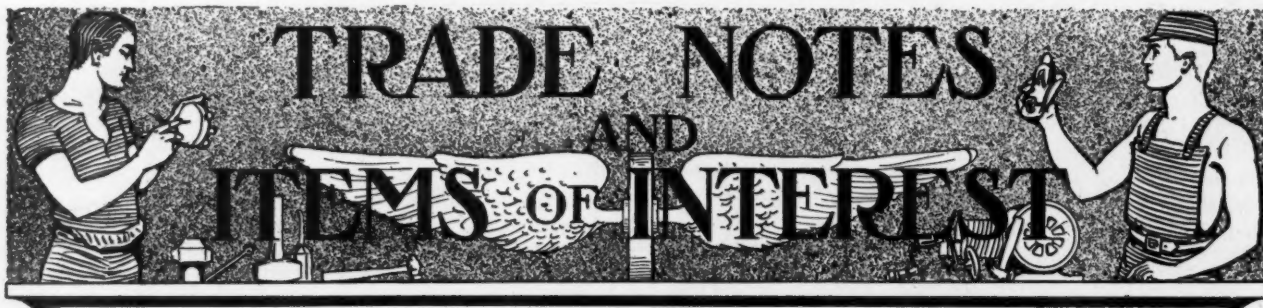
Effingham, Ill.

I want to say something about raising rafters where the span is wide from the purlin to the ridge—such as the rafters on a barn. Where the rafters are high there is often a great deal of trouble to build a scaffold—sometimes more trouble than raising the rafters.

My way of raising these rafters is to raise about three pair the best way I can, building a scaffold if necessary, and after the first three pair are raised, brace them well. Then nail sheathing on about three feet from the ridge on each side, and let the sheathing extend in the direction you are going to raise your rafters. You can space this sheathing the width you want your rafters. Then lay a board through from the sheathing on one side to the sheathing on the other side. A man gets up on this board, and the men at the plate slide the rafters up the rafters that are already in place, and the man at the top will take them under the sheathing on which his board is resting, nail them together, and shove them out to the place spaced, nailing the sheathing on each side of it. Then he is ready to lay a board between the next rafters and so on until the rafters are all up. The person at the top will have to have two boards, one to sit on and the other to lay the boards over.

On the last barn I built the rafters were too heavy for one man to handle, so I put sheathing on each side of the roof down about six or seven feet and laid a plank on across, and had a man on each side to take the rafters and nail them together and in their proper places. I did not let the sheathing on this building extend forward, but had short pieces about the length I had my rafters spaced. I nailed them on from the rafter already up to the one last raised so that the men at the top would not have to take the rafter under the sheathing, which is sometimes difficult. The men then lay the plank behind them in front of them, and so on until the rafters are raised.

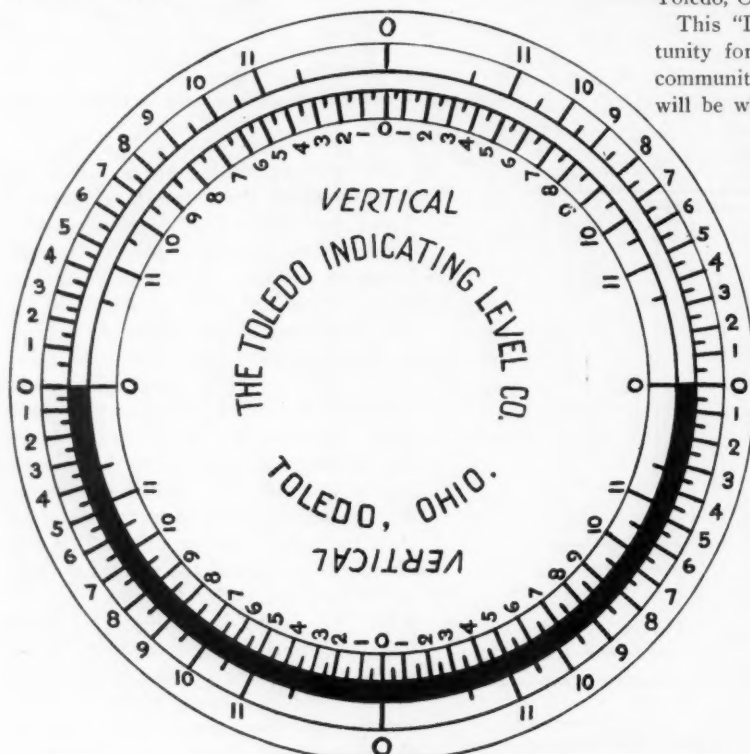
GEORGE BUCKHOLZ,
Contractor and Builder.



Through this department the Editors aim to keep builders, contractors, carpenters and architects in touch with what their friends, the manufacturers, are doing for them in new or improved tools and machinery, methods and materials—pertaining to building. Items for these columns must have real news value; they are offered here as interesting information for our readers; they are not advertising. No matter will be printed here simply because some advertiser wishes it. Likewise, no matter will be excluded simply because the article described is not advertised in this magazine. Suggestions for the betterment of this department are requested of our readers.

The Level that Talks

"Hold on there, you are a quarter of an inch off to the foot!" How would you like to have a level that talked to you like this, checking up your work as you go along so that all the time you could be sure of proceeding with absolute accuracy?



Life Size View of Dial. Red Liquid Registers on Scale in Two Places, Insuring Accuracy.

This is what the "Toledo Indicating Level" does. With this level, instead of guessing at it and then testing with the spirit glass, you simply raise or lower an eighth or a quarter inch or whatever the level says and the work is done. It is only necessary to refer to this indicating level once to be sure of accuracy.

The accompanying illustration is a full size view of the indicating dial of the "Toledo Indicating Level." It consists of a shallow pan filled exactly half-way up with red unfreezable fluid. Over this pan of fluid is placed a heavy piece of frosted plate glass. On the face of this glass all lines and figures are in blue enamel, and so very easy to read. The red fluid shows through only in the free circle inside the indicating marks. The reading is always the top line of the liquid.

Every figure on this dial has a practical meaning that is fully explained in the circular of instructions. Carpenters and masons find this Indicating Level indispensable in laying walls, getting proper grade for cement floors, getting pitch of roof, and also for all leveling and plumbing work.

This improved leveling instrument will find instant acceptance by all building

craftsmen. In construction it is practically unbreakable; so simple it cannot get out of order; never has to be adjusted. The assortment of styles includes levels 12, 24, 30, and 42 inches long. Three of these styles are illustrated on another page of this issue. Investigate this at once, writing the Toledo Indicating Level Company, 13th Floor, Nicholas Building, Toledo, Ohio, for full particulars.

This "Level that Talks" seems to offer an unusual opportunity for *extra profits* for a few energetic agents in every community. We believe the Toledo Indicating Level Company will be willing to make an agency offer to a number of our readers if they will apply at once. It looks as though this would be an easy level for a carpenter to sell. When you see it and are using it in your work you get all enthused over it, and nothing is more natural than for you to exhibit it to your brother carpenters and masons and take their orders. This is certainly worth looking into. Write the Toledo Indicating Level Company, 13th Floor, Nicholas Building, Toledo, Ohio, today.

It Scrapes and Brushes—and Sells Freely

A live proposition for agents is illustrated below. It seems that every family wants one of these shoe scrapers and polishers on its door step. It automatically removes mud, dirt or snow from the shoe in one operation. It preserves the shoe and saves carpets and floors. This scraper has seven new patented features.

As the price is low, it sells easily. Agents are making big money. Write today to Dept. 17, Security Mfg. Co., Toledo, O., for free catalogue and exclusive agency territory.



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Beautiful—Durable. Surfaced with genuine Slate. 2 colors—Red and Grayish Green. \$2.25 per roll of 108 Square Feet.

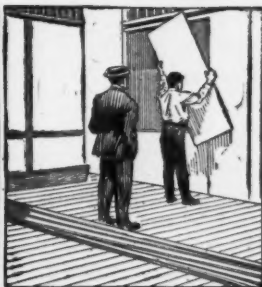
Price per sq. of Jap-a-Top Shingles 424 Shingles \$4.75
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735 Federal Street, Davenport, Iowa

Business Originally Established 1865—49 Years

A Safe and Sure Way to Safety

The loss of life by fire in recent years in the United States has been enormous, and anything that will curtail this loss is eagerly being sought, especially by the building fraternity. Every building erected, if it is over one story in height, should be equipped with fire protection. The average fire-escape is more or less ugly, and, as it often proves in the case of fire, the approach to this fire-escape is cut off by the flames. This is now, however, a thing of the past.

The Kingsteel fire ladder is a device of extreme simplicity, and one that should be in every home, factory, school-house, business block, hospital; in fact, in every building—whether



If Desired the Ladder May be Placed in Portable Fibre Case Which Can be Stored in Closet or Any Handy Nook.

equipped with a stationary fire-escape or not. If the building is equipped with stationary fire-escapes the Kingsteel fire ladder is an ideal supplementary fire-escape. Its construction is such that a

woman or child can handle it with ease, and yet it is strong enough to support any weight that you can place upon it.

Almost everybody pays out money for fire insurance, and considers it a good investment; and yet how much better an investment it is to guard against loss of life, as well as loss of property. These lives are worth infinitely more than money; and the investment is small.

The builder is the first man in the community who should take it upon himself to boost this "Safety First" proposition. He is the man from whom advice is sought as to the equipment that should enter into the construction of a building. In other words, he is practically the architect of the buildings he erects, and knowing this the Vaughan & Bushnell Manufacturing Company, 2130 Carroll Avenue, Chicago, Ill., are endeavoring to enlist the services of responsible building contractors in the sale of the Kingsteel fire ladder.

They realize that the builder is the man whose word carries

weight. And consequently they are desirous of finding responsible contractors who will represent them in every locality.

It seems to us that there is a field that will be unusually attractive to a great many of our readers. We have seen the Kingsteel fire ladder in operation and know that it has all the merits that is claimed for it. Study the accompanying illustrations. The fire ladder is a light, compact, folding, durable, portable, metal ladder that really offers

a safe way to safety, and there are in your town a good many of your business friends, both among home owners and owners of buildings of other kinds, who would appreciate knowing about the Kingsteel fire ladder. It is an article that you can honestly recommend to the fullest extent, and its cost is very little more than the cost of a good suit of clothes or a piece of furniture; and it will last a lifetime. It affords protection to those that are dearest to us, and in this regard it is better than life insurance, for life insurance protects the family while the Kingsteel fire ladder protects not only the family, but the protector of the family.

The Vaughan & Bushnell Manufacturing Company are offering a proposition that will attract a good many of our readers, and we suggest that you, as a wide-awake builder, get in touch with them without delay. Address them at 2130 Carroll Avenue, Chicago, mentioning the AMERICAN CARPENTER AND BUILDER.



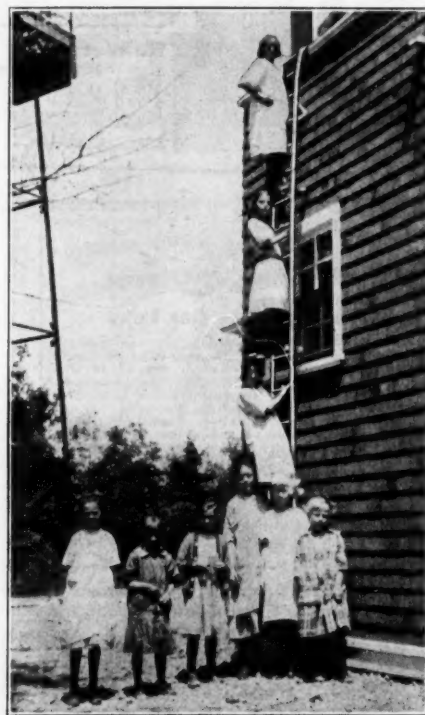
Out of the Way When Not in Use.



A Second-floor Ladder Weighs about 25 Pounds; a Third-floor Ladder Weighs About 40 Pounds.



Light and Compact. A Woman or Child Can Handle it with Ease.



The "Kingsteel" Fire Ladder is Built with Heavy Steel Forgings and is Treated so that it is Rust Proof.

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The type and extent of this summer hotel will show how rapidly **Fiberlic Building Board** has been taken up for use in the more important class of buildings. The quarter inch board was employed in this interior Construction.



If you are connected with the building industry in any capacity you will welcome **Fiberlic Building Board**, a material that is suitable for all kinds of interior construction, yet cheaper and far better than lath and plaster.

Fiberlic Building Board is not made from various kinds of soft wood; but from a wiry, interlacing mass of chemically treated root fibre. The tremendous pressure, to which this fibrous mass is subjected, produces a hard, rigid board—a board that can be used in hundreds of places where wall board has been found impracticable.

Fiberlic Building Board is produced in eighth, quarter and half-inch thicknesses. You can appreciate what that means when the big jobs—the expensive buildings are undertaken.

If you are interested in learning more about this new and better building material, write to our Builder's Department for information that is important to all up-to-date builders and carpenters.

It is a rather remarkable fact and a pleasing one to us, that **Fiberlic Building Board** has been taken up by dealers with great rapidity. The reason is a simple one—**Fiberlic Building Board** has a wider field of usefulness than any other material intended for the same purposes. Experimentally, **Fiberlic Building Board** is several years old. So far as the public is concerned it has been on the market less than a year. That fact alone is of great advantage to a dealer who wants a live agency—it gives him a chance to participate in the rapid growth which we are experiencing.

We have a particularly attractive offer for first class dealers in all localities where we are not yet represented.

Why not write today and find out how you can benefit yourself and your trade by stocking

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Carpenters, Builders: let us send you samples. In writing tell us the name of your local building material dealer.

Mac Andrews & Forbes Company, - - - Camden, N. J.

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN CARPENTER AND BUILDER

Wyoming Asbestos

AN INTERVIEW WITH MR. FRED PATEE, PRESIDENT WYOMING ASBESTOS PRODUCING COMPANY

IT is a pleasure to meet and talk with an enthusiastic man, especially when his enthusiasm is sincere,—founded on thorough knowledge and wide experience. It is both a pleasure and an education to listen to such a man as he talks of the object of his enthusiasm.

As Editor of a well known building magazine, we constantly come in contact with enthusiastic men. The building industry, both on the construction and manufacturing sides, seems to be full of them. And it is an encouraging thing. The successes that have been made in the past in the building field, the enormous present market, and the hopeful signs for the future, all breed enthusiasm.

It has been our observation that most of these enthusiastic men have won out—have forced their hobbies to success in the building field, even sometimes in spite of obvious handicaps and shortcomings—that is, as it has seemed to us. It is doubly pleasant then to meet and come to know an enthusiast whose proposition appeals at once to one's judgment,—one concerning which even the pessimist and skeptic immediately enthuse.

Such was our impression and thought after first meeting President Patee of the Wyoming Asbestos Producing Company. He was superintending at the time the installation of an educational exhibit at the company's booth in the Chicago Building Material Exhibit. A Wyoming asbestos fire-escape was being constructed and quantities of the asbestos rock, just as it comes from the quarries near Casper, were at hand.

"That," said Mr. Patee, picking up a lump the size of our head, "is Wyoming asbestos in its crude state. Its possibilities in the building and insulating fields are practically unlimited. Notice those fibres. They are all through the serpentine rock. We crush this material and have an ideal mixture of clean, sharp grit and fibrous binder to mix with Portland cement to make an absolutely fireproof, non-cracking stucco.

"Of course you are familiar with asbestos. It is perhaps the best known of all building materials. It has enjoyed unlimited free advertising. Ever since the terrible Iroquois Theatre fire in Chicago every theatre has had to have its Asbestos fire curtain; and the public has felt reassured; in fact, perfectly safe whenever they have seen the word 'asbestos.'

"Asbestos has long been imported into this country and a great industry has been built up, an industry that has been practically a monopoly, protected by high prices and many mysterious 'trade secrets.'

"It was formerly supposed that no commercially available supply of asbestos exists in this country. And then came our discovery and the development of our immense quarries near Casper, Wyoming. Edwin Hall, former State Geologist of Wyoming, reports that we have 'a mountain of asbestos,' and that would be literally true if the deposit stood alone in level country. As it is, our claims covering 440 acres occupy a sort of spur to one of the mountains near Casper. The rock is all like this—serpentine and fibrous asbestos. All is of equal value as fireproofing material, as the rock is substantially pure asbestos."

* * *

Here we had an enthusiastic man. He is heart and soul in the project of giving this country better building construction and of cutting down the enormous fire loss. And we joined him at once in this enthusiasm, for we could see the possibilities in the big general building field for this material, since it is made commercially available—a utilization of short fibre asbestos rock, crushed at small expense and delivered in

carload lots to all parts of the country, so as to compete in cost practically with sand and gravel—this material absolutely fireproof, strong because of the interlacing of asbestos fibres, and light in weight; in fact, the ideal base for all plastic materials! That was the thought that came and it brought conviction and enthusiasm with it.

"I know that your readers are going to take to this," continued Mr. Patee; "you could devote an entire issue to just this Wyoming Asbestos Fire-Escape, and it would be the most truly interesting matter you could publish. Or again, the exterior stucco of Wyoming asbestos. That is probably the biggest field for development that we have. Wyoming asbestos combined with Portland cement makes a stucco for exterior walls that positively cannot crack. Extremes of temperature do not affect it, and being of a very light specific gravity, it does not overload the walls. Just think of what it means at this time when imports of foreign magnesite are entirely cut off by the war, to have this improved stucco material *formed exclusively of American materials*. I tell you we are taking the mystery out of the asbestos business and also out of the patent stucco business. All there is to Wyoming Asbestos Stucco is just pulverized Wyoming asbestos rock and Portland cement with a little hydrated lime added for waterproofing.

"Any contractor anywhere can obtain these materials and do a first-class stucco job, one that will never crack or peel off. However, to save the contractor some bother and to make sure that just the right proportions are used, we are doing the mixing at our mills. All the user has to do is to add the water and slap it on the wall."

It certainly did sound interesting, and we realized then that we would not be able to give up as much place to the consideration of Wyoming asbestos and its utilization in the building field as the subject does deserve. But then, we never have been able to do full justice to any of the big things in the building field. Those who are interested always have to investigate further when they want complete data. And that serves its good purpose too, as it brings reliable business men and contractors closer together.

Accordingly, we shall have to be content with mentioning very briefly some of the other uses for Wyoming asbestos, trusting that everyone who reads this will communicate with the Wyoming Asbestos Producing Company, Building Material Exhibit, Insurance Exchange Building, Chicago. Here is a matter of importance and interest to every builder, contractor and architect, and to every building supply dealer and to many manufacturers. We suggest full investigation.

The Research Laboratories of J. H. Matthes, 2049 North Wood St., Chicago, after making a full chemical and physical examination of Wyoming Asbestos, reported in part:

First—The short fibre found in connection with serpentine will felt and make asbestos board, furnishing its own binder.

Second—Pulverized asbestos is usable for fireproofing.

Third—Serpentine rock will make artificial stone for flooring. With it an absolute fireproof building can be constructed.

Fourth—(Wyoming asbestos) is the most excellent material for the manufacture of refrigerators and cold-storage.

According to a report of the Sage Foundation, published in the *Saturday Evening Post* of February 15, 1914, we burn up every week in this country an average of 3 theatres, 3 public halls, 12 churches, 10 schools, 2 hospitals, 2 asylums, 2 colleges, 2 jails, 26 hotels, 3 department stores, 6 apartment houses, 140 flat buildings and nearly 1,600 houses. These figures are outrageous. Certainly we need asbestos for fireproofing in this country. Wyoming Asbestos will make this cheaply available for all.

Our Recruiting Office

is busy enrolling the names of carpenters and contractors who realize that

Wood is the only material of which a floor can be made that in every way is satisfactory to all who use it.

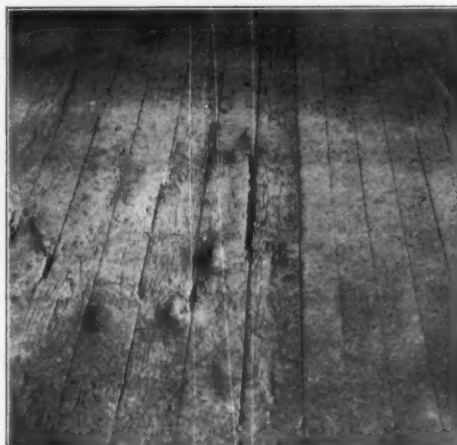
Acting on their knowledge they are busy **putting "Maximum Value One-Piece Hardwood Floors,"** in every building that needs a new floor.

"Winter Dullness Routed,"

is the report from every section where an active campaign has been started.

Have You Joined the Army?

A small army would be required to put in all the Maple, Beech and Birch floors that should be laid this winter in your town.



After twenty years' service Maple flooring shows no wear. Study the condition of the other flooring.

You may not hope to replace all the wornout floors in the next six months but you should and with very little effort you can make a start, and from that start you can build up a flooring business and a general jobbing business that will be a source of much profit to you.

We have the means and shall be glad of the opportunity to help you make a start. Send for free instructions.

Maple Flooring Manufacturers' Association

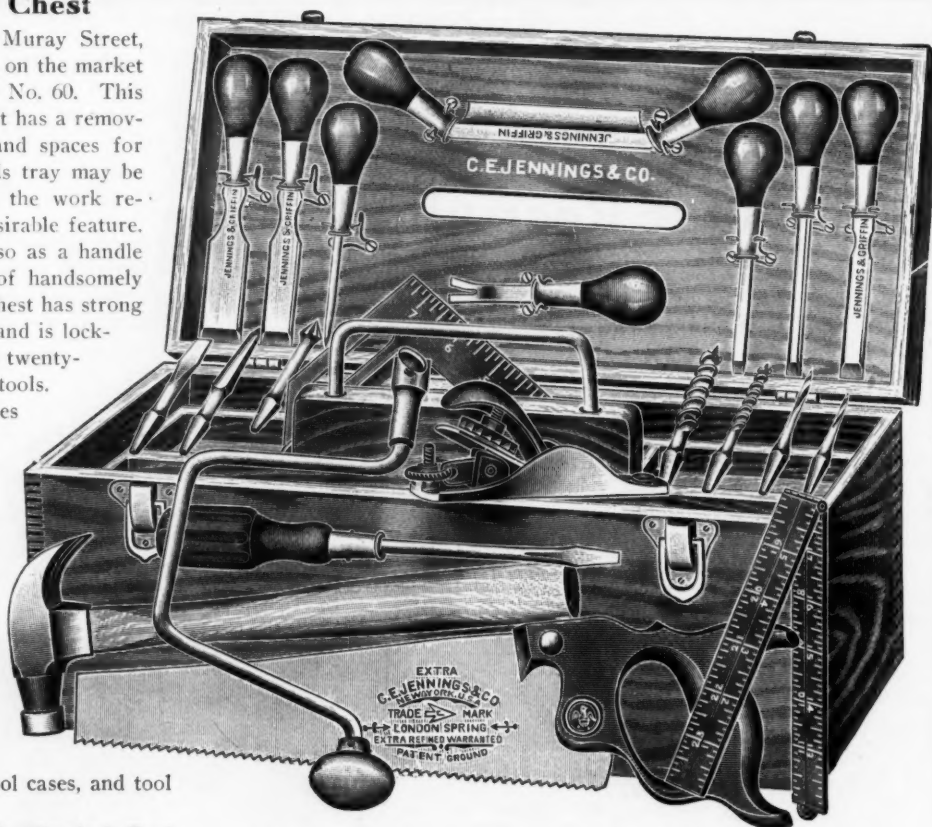
Stock Exchange Building -
CHICAGO, - ILLINOIS

New Sort of Tool Chest

C. E. Jennings & Co., 71-73 Muray Street, New York, U. S.-A., are placing on the market their "Little Wonder" Tool Kit No. 60. This is a Tool Kit that is *different*. It has a removable tray with a wire handle and spaces for nails, screws, tools, etc., and this tray may be carried from place to place as the work requires. This is a unique and desirable feature. The handle of this tray acts also as a handle for the chest, which is made of handsomely finished seasoned lumber. The chest has strong strap hinges and suit case bolts and is lock-cornered. This tool kit contains twenty-two useful and fully warranted tools. It is of convenient size, 17 inches long by 8 in. wide and 6 $\frac{3}{8}$ in. high, and weighs, filled with tools, about eleven pounds. It makes a handsome and useful holiday gift and may be sold at a moderate price. It is, therefore, desirable for the holiday trade and is proving a great seller. In shipping, the handle may be pushed down flush with the lid.

C. E. Jennings & Co. claim to have the largest line of tool chests, tool kits, tool cabinets, tool cases, and tool outfits, etc., made in America.

Circulars of the No. 60 "Little Wonder" Tool Kit will be furnished on application.



C. E. Jennings & Co. No. 60 "Little Wonder" Tool Kit.



Uncle Si
Says:

*"This Year give him an
Economical, Useful Present."*

Any man, carpenter or family man, would appreciate receiving for a Christmas Gift a SIMONDS Hand Saw. It would be most welcome because it is a first class tool. Ask your hardware dealer, or, we will send one to any address in the United States, express prepaid, upon receipt of \$2.50. Just tell us the length, 24 or 26-inch, and number of points to the inch if any special number wanted.



SIMONDS MANUFACTURING COMPANY
FITCHBURG, MASS.

17th St. & Western Ave.
CHICAGO, ILL

209 Madison Avenue
MEMPHIS, TENN.

THE LEVEL THAT TALKS THE TOLEDO INDICATING LEVEL

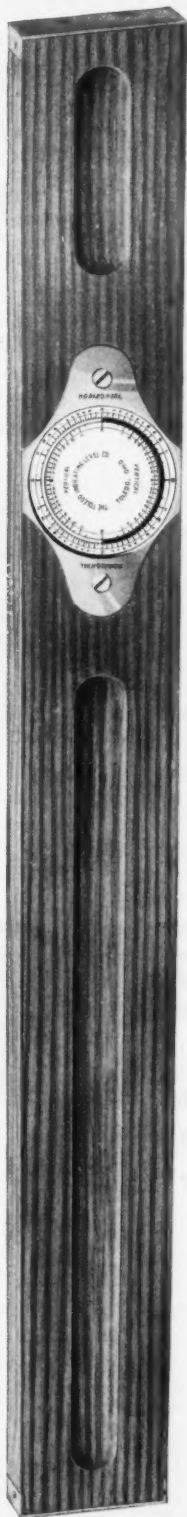
Indicates Exact Distance Out of Level or Plumb

The Toledo Indicating Level tells you at a glance and to the fraction of an inch just how much you're off, exactly where, and how much to the foot.

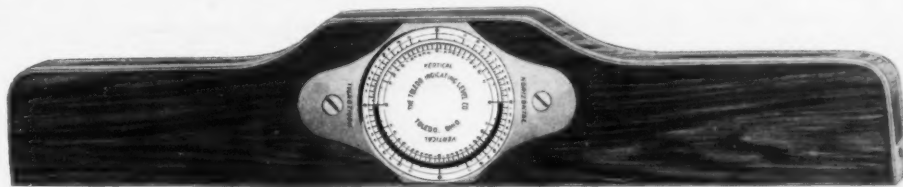
Absolute Accuracy Guaranteed

Liquid always finds a perfect level, and double reading guarantees accuracy. No guess work. It will save time by telling you how much you are off to the foot. Simply raise or lower necessary parts the amount the level says you're off and you're through. By correcting your work the amount the level indicates you know your work will be correct without further testing. One shift instead of several—Guaranteed Accuracy instead of guess work. Especially efficient for rafter and all kinds of roof work.

We make this model in a 24 in. size also — No. 5, Price \$5.00



No. 108. 42 In. Long
PRICE \$5.50



No. 103. 24 In. Long. All Brass Bound. PRICE \$6.25

Needs No Adjustment

This level requires no Adjusting during its entire life time. The movement of the Level is fitted into the stock and fastened so securely that there is no chance of the instrument ever getting out of order or adjustment. It is strongly and rigidly constructed and is practically unbreakable.

Easily Read in All Places

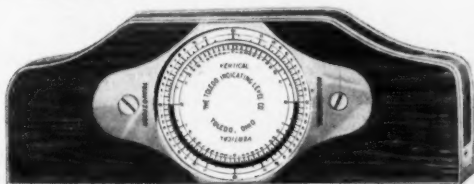
Dial is made of heavy white frosted glass, on which all lines and figures are in blue enamel, very clear cut, making it easy to read in dark and out-of-the-way places. The red indicating fluid is shown only through circular lines which tells whether work is at desired angle or not. If not at the desired angle, it will tell accurately just how much it is off.

Notice the Special Free Examination Offer. We will send you prepaid any of the styles shown above for free examination. Test it out thoroughly. Check it up. If it makes good you can send us the price. If it does not come up to your expectations, send it back at our expense and we will consider the incident closed. Or write to us for fuller information and details of this Wonderful Level.

The Toledo Indicating Level Co.

1941 Nicholas Bldg.

TOLEDO, OHIO



No. 101. All Brass Bound, 12 In. Long. PRICE \$5.50

Free Examination Offer

The Toledo Indicating Level Co.,
1941 Nicholas Bldg.

Gentlemen — Please ship me Level No. It is understood that after thoroughly testing this Level if it fails to come up to my expectations I have the privilege of returning it to you carriage collect. If satisfactory, I am to remit purchase price within five days.

Name.....

Address.....

Wanted - - - 20 Men

—not men out of a job, but men who want to get out of a job and start in a business of their own!

—not men who have failed at other businesses, but men who are already successful and want to build bigger!

IF you are the right man, here is an opportunity to start small and build up a business that will bring in enough money to make you financially independent.

IT'S no get-rich-quick game; to win you've got to have a little capital, and do a lot of good, hard, hustling work.

BUT—the business is there—and the profit!

NO experiment. A trade marked article fully protected by patents. In universal demand wherever known. Seven years' test has shown no weakness. We will show you the original letters from scores of men now making money on the proposition.

LOOK over the advertisements in this magazine. See how many of them you can find that offer you an opportunity to go in a *new* line—a line in which you can build up a business without fear of a competitor pulling it down again.

YET this is just what we have to offer you. Make *us* prove it if you like. Moreover, it is a business that, once established, is not affected by hard times; a business you can open up and shut down like an umbrella according to the state of your sales and collections.

CAPITAL invested is ridiculously small compared with possibility of returns. Special skill or experience not essential. Any respectable shed may be used as a factory until outgrown. Materials used not expensive. Tools only a few dollars. Day labor your only payroll.

IN December and January we can start twenty men in their respective territories (over 250 territories are gone already). If you are interested let us send you more details—you may investigate and check up to your heart's content.

ASK all the questions you want—no obligation whatever; but please don't write unless you are in a position to talk real business in case you are satisfied on every point. For catalogue and full particulars, address

The Norwalk Vault Company
40 Seminary Avenue Norwalk, Ohio

The Stanley "55" Plane and How to Use It

The Stanley "55" Plane has been truly called a planing mill in itself. It is a universal hand tool that is a plow, dado, rabbet, filletster and match plane, a beading and center beading plane, a sash plane and a slitting plane all in one. It is also a superior moulding plane and will accommodate cutters of almost any shape and size.

The Stanley Rule and Level Company have been manufacturing this plane for some years, and it has become quite well known. The manufacturers have now issued an elaborate instruction booklet describing and illustrating this plane, showing exactly how it is used for the large and varied line of work it successfully handles. All woodworkers will be interested in this booklet, and should write at once for a copy. Copies will be mailed free to our readers.

The illustrations in this booklet are especially clear and instructive. In all, there are 80 figures, each one accompanied by very clear explanatory notes.

The Stanley "55" Plane is nickel plated, 10 inches long, and weighs 7¾ pounds. Fifty-two different cutters are furnished with the plane. With these the workmen can produce any and all of the mouldings generally used. A further line of 42 cutters is regularly carried in stock, and any different cutters to work special forms of mouldings can be made from blanks by the owner himself, or if desired, may be ordered from the factory according to sketch.

A study of this booklet will be an inspiration and delight to any wood craftsman. Address the Stanley Rule & Level Co., New Britain, Conn.

Of the two million trees to be planted on the national forests of Montana and northern Idaho during the present fiscal year, one-half have been set out this fall and the rest will be put in next spring.

WINTER BARGAINS

In Mill Work and Building Supplies for Interior Work

Winter is here and most building will be confined to interior work, finishing, cabinet making, etc. We have made special prices on all interior Millwork and Supplies. Prices that will surprise and please you. We realize that building is not as brisk in the cold months and so have lowered our prices to the last notch. Try us with a sample order.

"To Huberize is to Economize"

We can quote lowest prices on highest quality goods. Our deliveries are prompt and all around satisfaction is guaranteed. We have featured this month all kinds of remodeling material—Wall Boards—Plaster Board—Paints—Varnishes—Cabinet Work—Flooring—Stair Work and Interior Trim of all kinds. Here are a few items taken out of our large catalogue of high grade building material.

Duplex Plaster Board.....	per roll, \$ 1.10
Flooring (yellow pine, per 1000 ft. board meas.)	\$22.00 to 45.00
Lath (per 1000 pieces. Cypress, yellow pine, bay poplar).....	3.50 to 5.15
Picture Mould (per 100 lineal ft.).....	.75
Sink Trim (per set).....	2.50
4 Panel Door (all sizes and various woods).....	.93 to 3.81
Liquid Wood-Filler (gallon cans).....	.94
Paste Wood-Filler (per lb.).....	.94
Floor Paint (in 10, 5, 1 gal. cans, per gal.).....	1.30
Crack and Crevice Filler (per lb.).....	.12
Floor Wax (per lb.).....	.40 to .50
Ball Top Loose Pin Butts (per pair, all sizes)	.08 to .28

We also manufacture the most complete line of mantels at all prices, medicine cabinets, fire-places and cabinet side-boards. If you are a builder you should have both our large building material catalogue and mantel book. We'll send them free if you send us your name and address.

THE HUBER BUILDERS MATERIAL CO.

45-49 Vine Street

Cincinnati, Ohio

GET OUR CATALOGUES

Saved \$7 to \$10 per M - got better Lumber

Read this letter

Learn how an enterprising Minnesota contractor made an extra \$130 on just one job.

Buy your lumber the better way



HEWITT-LEA-FUNK COMPANY,
Seattle, Wash.

Gentlemen:—

I have just unloaded my car of lumber and millwork that I bought of you, and will say that I never have seen any lumber and millwork that will compare with yours, and the saving in price is from \$7.00 to \$10.00 per M with all freight charges paid.

Yours truly,
WM. ZUM HOFE

Hamburg, Minn.,

Here's your
Start
toward
doubled
profits

Decide now to get doubled profits on your next jobs

Think of making \$130 extra on just one job! What a big difference a year of doubled profits would mean! You'd soon be on easy street! Now's the time, during the "off season," to plan doubled profits *next season*. Write for the

H-L-F House Pricer

Get ready to get quick prices without sending material bills

The H-L-F House Pricer is a big hit! Enables you to put in a quicker bid. If you haven't taken off your bill of materials, the H-L-F House Pricer enables you to get a price without this. Simply use the H-L-F House Pricer—outline the kind of house desired—answer a few simple questions—and get a guaranteed, freight-paid, NO EXTRAS price on H-L-F materials. Send for H-L-F House Pricer NOW—ready to get our amazingly low prices on lumber that's not in the class with that sold at the local yard. H-L-F lumber is clean, straight-grained and highest quality.

Grades guaranteed

Controlling through our officers the forests and mills, we guarantee absolutely the grades we sell. It's all fresh stock that nobody's had a chance to pick over. Satisfaction guaranteed or money refunded.

Speedy delivery

Seven railroads fight for our big business. We get service. We ship in 24 to 48 hours, deliver far as Mississippi River in 2 weeks. Lumber usually arrives before you're ready.

Get Our Prize Plan Book

Contractors pronounce the Hewitt-Lea-Funk Plan Book the *best ever*. It's full of houses that sell—real homes planned for folks who work for their money. Two big editions were sold in 7 weeks—third edition now ready. Send 10 cents for your copy today.

Barn Builder's Guide for barn plans

Another Hewitt-Lea-Funk Co. winner is the Barn Builder's Guide. Valuable information on barn building by John H. Fleming, a contractor whose experience covers two continents. Shows and explains Mr. Fleming's famous gambrel-roofed barn—no posts or tie rods. Sent for 4 cents.

Hewitt-Lea-Funk Company

Not in any trust or combine
Capital, \$1,000,000

408 Crary Building,
Seattle, Wash.

H-L-F Silos

Double wall, freeze proof Silos at half the cost of stave silos. 14 x 30 foot silo, delivered anywhere.

100 Tons
\$174.73

Send for circular.

Sending the coupon has started many contractors towards easy street.

Hewitt-Lea-Funk Co.

408 Crary Bldg.,
Seattle, Wash.

Gentlemen—Please send me the following:

- ☐ H-L-F House Pricer (Free).
☐ Plan Sheet (Free).
☐ Approximate cost of H-L-F Stud and Wall Board Construction for house I intend to build. Width of house _____ ft., length _____ ft., number of outside doors _____, number of windows _____.
☐ Prize Plan Book (send 10 cents). ☐ Barn Builder's Guide (send 4 cents).
☐ Delivered, freight-paid price on enclosed list of materials (no charge).
☐ H-L-F Silo Folder (Free). ☐ Millwork Catalog (Free).
☐ Freight-paid price H-L-F Silo. Diameter _____ ft., height _____ ft.

Name _____

Street or R. F. D. No. _____

Post Office _____

State _____ Business _____

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN CARPENTER AND BUILDER

Breast Drill No. 112

The long line of drills made by Millers Falls Company, of Millers Falls, Mass., has been made even more comprehensive by the introduction of Breast Drill No. 112. This is a breast drill reduced to its simplest form, the object being to produce a tool of the usual high standard of workmanship of the Millers Falls Company, but of a lower cost than other breast drills upon the market.

The tool has the appearance of costing more than it does. It is handsomely finished with malleable iron frame,



japanned black, outside of large gear painted gray with red stripe and inside of gear and underside of breast plate painted red. Crank is black, oxidized, and chuck is polished. Breast plate is adjustable to different positions and is removable. The gears are cut, the small one being of steel, and the ratio is $3\frac{1}{2}$ to 1; diameter of large gear is 4 inches. The thrust bearing is upon a hardened steel washer. Chuck is of the Barber improved type with alligator jaws made from forged bit-paw steel, holding bit stock and many sizes or round shanks. At a slightly extra cost, octagon shells are supplied in the place of the regular Barber shells, and extra jaws for small sizes or round shanks are also supplied.

**Farmers Buying Monitor Cupolas**

A very promising money making opportunity has come out of Waterloo, Iowa. B. F. Lichty & Sons Co. are making it possible for carpenters and builders to earn some very attractive winter profits getting out among the farmers, sell-

ing the popular "Monitor" line of cupolas and ventilators. These ventilators are already pretty well known and so meet with a ready sale. They are attractive and durable, and possess all the strong talking points.

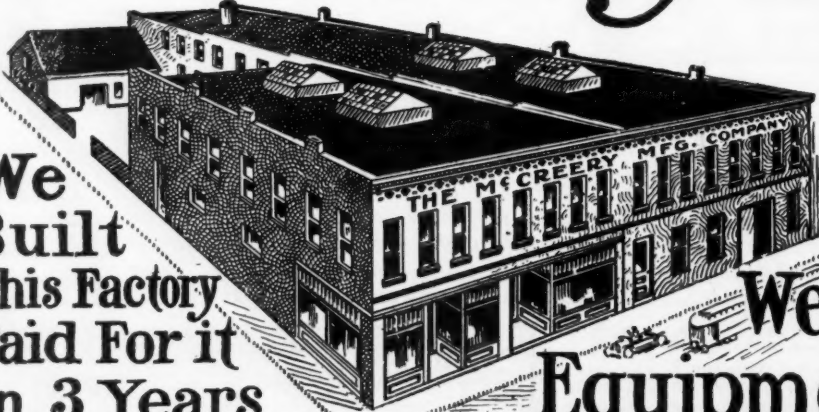
Whenever barns still carry old wooden cupolas there is a good chance to sell and install a Monitor Galvanized Steel Cupola. You also find many barns and other farm buildings in which there are no ventilators at all of any kind. If farmers would only realize how much more healthy and vigorous their live stock would be in well ventilated buildings there would be no barns or stables without cupola ventilators. By getting out among the farmers, many carpenters are keeping busy at good profits.

B. F. Lichty & Sons Co., Waterloo, Iowa, are making a special proposition to carpenters and contractors to take up this work. Write them for catalog and full particulars.



Own a Factory like this You Can

**We Built
This Factory
Paid For it
In 3 Years**



**We will furnish
Equipment Free**

ANY AMBITIOUS MAN OR WOMAN SHOULD SUCCEED
Requires no experience—We start you in business in your own town. Show you how to grow prosperous in the canvas glove business. THE DEMAND is enormous—continuous—never falling—everybody—everywhere wears canvas gloves—the farmer—mechanic—doctor—lawyer—the laborer—MILLIONS of canvas gloves are required to supply the demand—they have revolutionized the glove industry.

THERE IS A MARKET right in your locality—you can supply it. Every merchant and storekeeper for miles around will buy their canvas gloves from you—they want to patronize home industries—you can meet competition—sell as cheap or cheaper than they can get elsewhere—Besides we furnish you names of over 700 jobbers and dealers who buy canvas gloves.

YOU CAN START making money from the beginning—Profits are immense. Cost of production and maintenance of business, small. We borrowed money a few years ago—to start—began with two sewing machines—Today we employ many men and women—Have become independent and prosperous.

OUR GREAT FREE OFFER
We furnish the tools FREE—assist you to start a factory—co-operate with you to successfully conduct the business—give you the benefit of our experience—make it almost impossible to fail.

You become in reality A BRANCH of the McCreery Mfg. Co.—Working independently—we furnish the raw materials—you turn out the finished product—reap the profits.

There are no strings to our offer—you are not bound by any contract to buy from us—only a man to man agreement—that so long as our prices are as low or lower than you can get elsewhere you will buy of us—that's all.

Full information is yours for a post card—Send it Now.

McCREERY MFG. CO.

1051 Dorr Street

We Tell You All About The Business

In our interesting booklet—How we help you start for yourself—to become a successful business man or woman—How we can furnish the tools—equip you in the manufacturing of canvas gloves, FREE. All this is told in the booklet.

We have confidence in your ability to succeed—all that is required is ambition—a progressive-get-what-you-go-after-spirit and determination to make good. It costs you but a postage stamp—a postal card to learn more of this great opportunity.

Write today for book—Don't delay—Only a limited number of equipments will be offered FREE.

Toledo, Ohio

Builders: JAMES Service Will Help You to Get More Barn Jobs

And nothing will do more to open up a **big** barn building business for you than to erect one in a neighborhood with the advice and assistance of JAMES experts. That one job will lead to more, for the dairyman who sees a JAMES-designed barn wants one for himself.

It will pay you to learn more about

the latest, most economical and most sanitary methods of Dairy Barn Construction. It will open the way to new and bigger profits.

Builders in all parts of the country have taken advantage of this service, and many of them have made barn building the most profitable feature of their work.

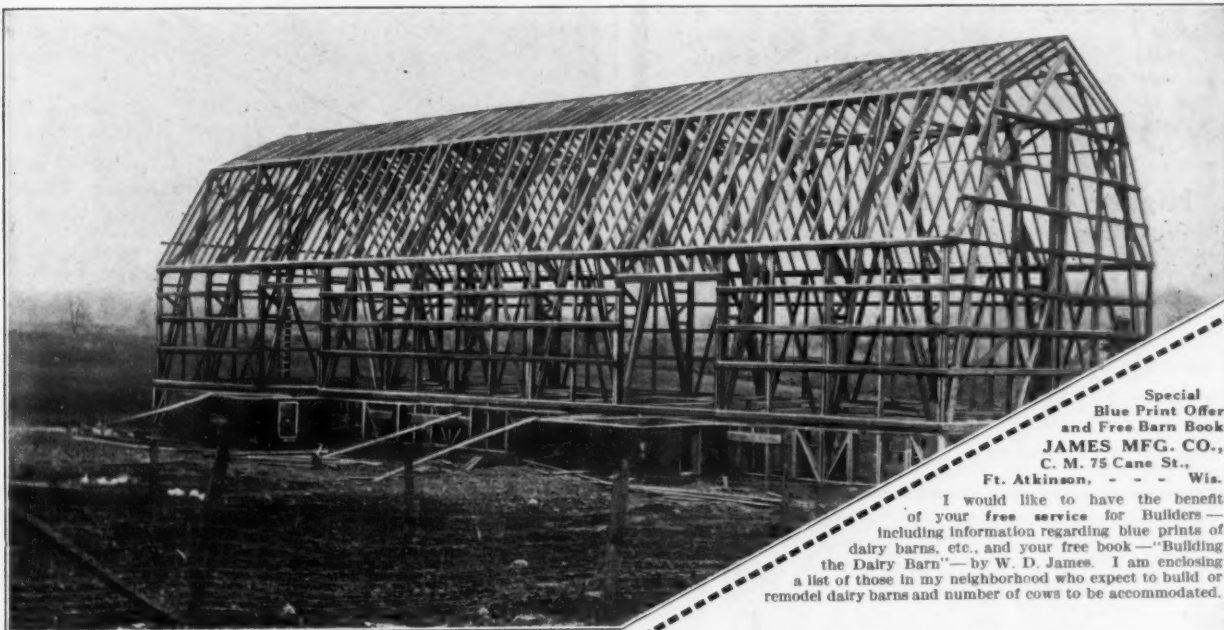
Helpful Dairy Barn Ideas FREE See Special Blue Print and Barn Book Offer Below

Our free service tells about proved principles that enable the builder to establish a reputation as the best barn-builder in his community. It tells about the plank frame construction—about ventilation, proper lighting and location, proper size and arrangement, construction of floors, position of posts, drainage, equipment, etc.

All we ask you to do is give us the names of

dairy farmers in your section who expect to build or remodel barns. We'll help create the business for you. **Let's work together.**

We have complete blue prints, specifications, floor plans and lumber bills for many different types and sizes of modern dairy barns. Ask about them now—and how to get the free help of our Architectural Department.



JAMES MFG. CO.,
C. M. 75 Cane St., Ft. Atkinson, Wis.

Special
Blue Print Offer
and Free Barn Book
JAMES MFG. CO.,
C. M. 75 Cane St.,
Ft. Atkinson, - - - Wis.

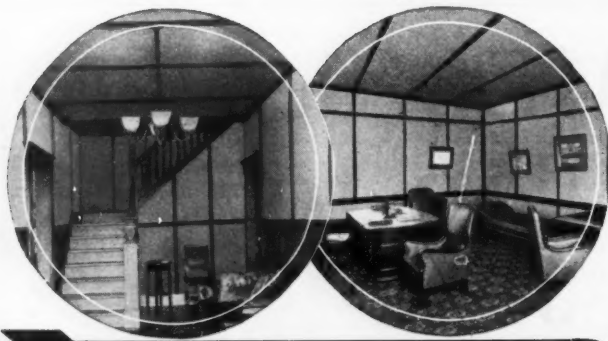
I would like to have the benefit of your free service for Builders— including information regarding blue prints of dairy barns, etc., and your free book—"Building the Dairy Barn"—by W. D. James. I am enclosing a list of those in my neighborhood who expect to build or remodel dairy barns and number of cows to be accommodated.

Name

Postoffice

R. F. D.

State



Are You Ready to Handle More Wall Board Work?

Here's The Proposition

Cornell Board is the logical successor to lath and plaster for all interior walls, ceilings, partitions, etc., in all kinds of buildings. That much is **admitted**.

Yet **some** building owners have not realized it yet! It takes samples, prices and a live building contractor to **convince** them. Will **you** do it—at a good profit to yourself?

Make It Your Business

To make Cornell Board work your **business** is to protect yourself against the usual slack season.

Cornell Board is adaptable to a host of uses. In remodeling old buildings Cornell Board can be applied over old lath and plaster. In the erection of partitions, store window backgrounds and similar work it is the only material worth considering.

Applying Cornell Board is **legitimately a carpenter's work**; it eliminates sub-contracting at big expenses which is usual with lath and plaster.



Cornell Board is all wood fibre, so thoroughly waterproofed and sized that it requires no preliminary painting; it's ready for decorating directly it is applied.

It can be cut with a saw or knife and applied with a hammer and nails. No trouble, no hard work. Cannot split, warp, crack or chip; is a perfect insulator against heat, cold and noise. Furnished in boards 32" and 48" wide and in even foot lengths from 6 to 16 feet.

Higher Quality Lower Price

Cornell Board is produced "from log to board" under one management—**ours**. So the quality will **always** be high, and the prices always low. Our distributing facilities assure prompt deliveries and low freight rates.

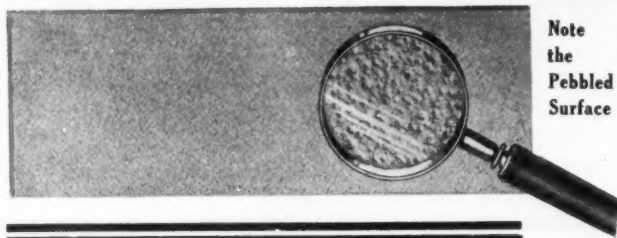
Write today for samples, prices and details of our co-operative sales plan.

CORNELL WOOD PRODUCTS CO.

SALES OFFICE: 125 W. Madison St., Chicago

Warehouses at all Important Shipping Points

Dealers in Every City in U. S.

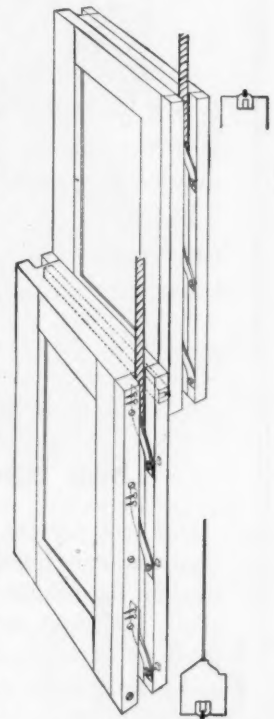


The Erlinder Window Sash Patent

Mr. Erlinder, of Chicago, has no use for weatherstrips. He says they are all right if you have to have them, but why pay so much for weatherstrips when for a good deal less money you can make your windows air-tight and non-rattling, so that no strips are needed?

The patent arrangement he has evolved to accomplish this is illustrated herewith. Mr. Erlinder is himself a skilled wood-working mechanic, and so has been able to appreciate the practical points in working out this proposition. Carpenters and builders are bound to like it.

The Erlinder window sash patent can be applied to any sliding window, and it absolutely prevents rattling, besides keeping out cold drafts and dust. It consists of a pair of wooden strips fastened together, or more properly held apart, by small steel springs. One of these strips is to be screwed fast to the edge of the window; the other left free, the springs pressing it out tight against the parting strip or blind stop. This, as you will see, simply makes the sash fit snugly. The give and take of these springs accommodate the sash to any variations in hanging the windows. While the sash is always free to move either up or down without binding, it is always a snug fit. The sash cannot rattle and no weather-strips are needed to make the window dust or cold-proof. The Erlinder patent sash springs are entirely out of sight. There is nothing about them to rust or wear out; nothing to get out of order or break. This spring strip device makes the sides of the window tight and snug, and for waterproofing the top and bottom rails and the meeting-rails of double hung windows a simple wood and felt strip is provided.



D. H. Windows with Erlinder Spring Strips.

This is a new thing, but it is a comer. It is worth looking into. Mr. P. E. Erlinder, 7922 Harvard Avenue, Chicago, is the inventor and manufacturer. Write him for special proposition to carpenters and builders to act as agents. The cost is small and the chance for profits large.



Interesting Roofing Test

When the late L. H. Montross, Camden, N. J., first introduced metal shingles to a skeptical public, just thirty-two years ago, he had no idea that a time would come so soon when for safety's sake fireproof roof coverings would actually be demanded by the law. Nevertheless, the time has come when wooden shingles are bound to go, because our law-makers are fully alive to the dangers of combustible roof coverings; and in many cities from the Gulf States to Maine, laws have been passed prohibiting the use of wooden shingles.

To prove the practical worth of the Montross metal shingle, a public demonstration was recently given, the results of which are of general interest to all roofers. Large sections were made of various roofing materials and placed around a large bon-fire, on frames at an angle, to depict the side of a roof. After fifteen minutes of the hottest kind of a blaze, the wood shingle sections had caught fire and were ruined, while the Montross metal shingles stood the entire test, with no damage.

A Silver Gray Panel



6 by 12-inch Panel

Six by twelve inches in size, stained with a new shade of Silver Gray on Birch, and neatly bound with cord ready to hang up, is yours for the asking.

Birch interior finish is permanent and satisfying because it

Is wear-resistant

Has a beautiful figure

Takes any shade of stain desired

Is reasonable in price

"Birch Interiors"

A big, new book of 40 beautiful pages illustrating modern halls, stairways, living rooms, dining rooms, fireplaces, and floor plans---shows styles of interior finish and color schemes that every architect and builder will appreciate.

Write to-day for Birch Book "C" and the Panel Sent Postpaid

They will help you get business

The Northern Hemlock and Hardwood Manufacturers Association
Department C, WAUSAU, WISCONSIN

whatever, and owing to the patented interlocking feature the frame supporting the metal shingles was not damaged at all.

The test has created widespread interest, and already many carpenters and builders claim that they have received a number of extra orders for Montross metal shingles, traceable to this demonstration. Agents all over the country are fast taking on Montross shingles, and are enthusiastically endorsing this shingle to all of their customers. Here is a chance for live dealers. Write the Montross Metal Roofing Company, 110 Erie Street, Camden, N. J., for particulars.

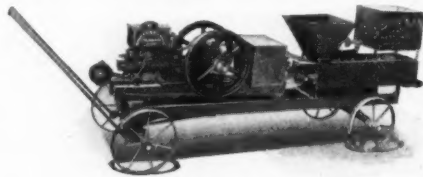


The Mixer from Oskaloosa

At Oskaloosa, Iowa, is a concern with the right idea about making and selling concrete mixers. They believe in turning out a practical machine at a moderate price. No fancy expensive frills for them, but a sensible mixer that will stand up to the work and prove its reliability for all foundation or sidewalk work or work at any concrete block, brick, or drain tile plants.

One of their popular mixers is illustrated herewith. They call it the "Simplex Junior Mixer." It is a low charging, labor saving machine, easily hauled around. This machine is made by the Western Manufacturing Company, Oskaloosa, Iowa.

Besides producing several types of mixers, they also make culvert forms. They have a free trial offer which appeals to careful buyers. Write them today for catalog and full particulars.



"Simplex Junior Mixer".

Money in Weather Strips

The Niagara Metal Weather Strip Company, 737 Main Street, Buffalo, N. Y., are addressing a personal word to every one of our readers. They say:

"Mr. Carpenter and Builder:

"Do you wish to substantially increase your yearly income?

"Good! Now we can talk business.

"Perhaps in your town or county where you are acquainted and now doing business, our metal weather strip is not represented. Why not try to secure the exclusive right of furnishing and installing our metal weather strip in your territory? You buy the strip on the per foot basis and install same at a handsome profit."

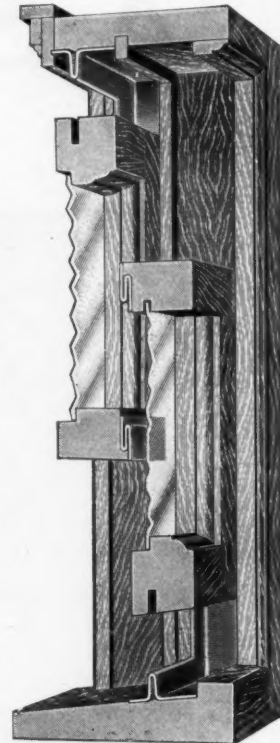
Their weather strip is claimed to be the easiest sold on the market.

The meeting-rail strips are double railed and tight.

The spring bronze is extra heavy gauge and straight. No kinks.

The all-brass threshold has conquered the door bottom problem.

The company ask that when writing for their proposition you tell them something about yourself, also territory desired.



A Well Stripped Window.

The IRWIN Bit

is imitated as regards pattern, but Irwin Quality cannot be imitated. Look for the trademark (illustrated below) stamped on the shank of every genuine Irwin Bit.

The IRWIN Bit
Reg. U.S. Pat. Office

IRWIN Stamped on a Bit means QUALITY

You users of tools must have tools of sterling quality. Your work demands it. That's why Irwin Bits should be included in your tool outfit.

For the jobs that must be just right, for boring in the hard, knotty woods, the Irwin is the one best bit. And it's the quickest boring bit made.

You've known many a bit to break where the twist joins the shank. This is impossible with the solid-centre Irwin Bit. It is trip-hammer forged out of one solid piece of Irwin Crucible Steel and tempered to just the right degree.

But be sure you get the genuine Irwin—look for the trademark.

The Irwin Auger Bit Co.
Wilmington Ohio

An Ideal Xmas Gift

Make Yourself or Your Friends a Present of

THE IDEAL

Rafter Square, Try Square and Mitre Square
Special Christmas Price, \$1.00

A practical, useful present for your fellow workers, friends, or your son. Contractors should give these to their men; they'll appreciate them and their use will save you time and money and make your men more efficient. They won't have to depend on the boss carpenter to lay out all kinds of rafters, bay windows, etc. A man with an Ideal Three-in-One Square can accurately lay out all rafter cuts, mitres, etc. The regular price of the IDEAL is \$2.00, but we are offering a limited number this month at \$1.00 to further introduce them. Send the coupon now.

This Movable Bar

shifts, giving you all desired angles for Rafter Work, Mitre Work, Many-sided Figure Work, Bay Windows, Interior Work etc. Simply spring pin in to desired hole and tighten thumb screws; Bar is shifted by spring from one hole to another in every scale; Pin loosened only to change scales.

The IDEAL Three-in-One Square

Why bother with a Steel Square and a lot of confusing mathematics when laying out rafter cuts, mitre work or any kind of angle work. You can do it accurately and in much less time with the Rafter Square, Try Square and Mitre Square. Nothing complicated about this tool, everything has been worked out and laid down in scale on this square. Any man can lay out accurately cuts for any style rafter—Common, Hip, Valley, Jack or Cripple. It takes years of study and practice to do this with the Steel Square. Here it is, laid down in scale right on the square. Just shift movable bar into hole marked, which shows number of inches rise to the foot, and mark off your cut. With it you can cut 3, 4, 5, 6, 8, 10, 12 or 24 equal sided figures, Bay Window or Mitre Work. This tool also makes all backing cuts—Hip, Valley, etc. Will cut 81 different angles, and when folded, fits into a space only 8 in. square. This tool for simple, speed and accurate laying out of all rafter cuts should be in every Carpenter's Tool Chest.

Ideal Tool Works Middletown, New York

This Special price of the IDEAL Square for this month will be \$1.00. We have reduced the price this month one-half to enable Contractors to buy a quantity of these tools so that they can present them to their men for Christmas. Send \$1.00 bill for each Square wanted.

Special Christmas Offer for All Builders

IDEAL TOOL WORKS Middletown, N. Y.

Gentlemen—

I am enclosing \$..... for which I am to receive, carriage postpaid, IDEAL Three-in-One Squares. If you only want one, simply pin a \$1.00 bill to this coupon and mail. Do it Today.

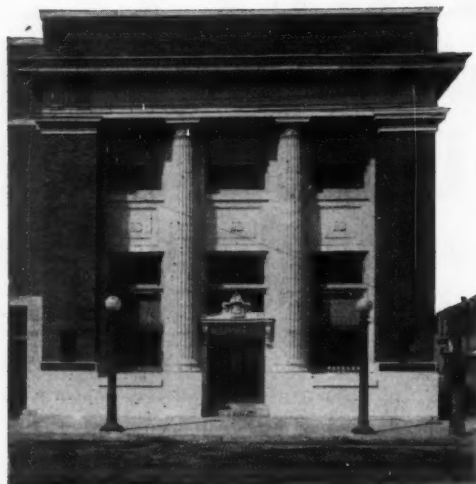
Name

Address

FREE
 Instruction
 Booklet sent
 with each Tool

TRY
 IDEAL RAFTER SQUARE
 MITRE

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN CARPENTER AND BUILDER

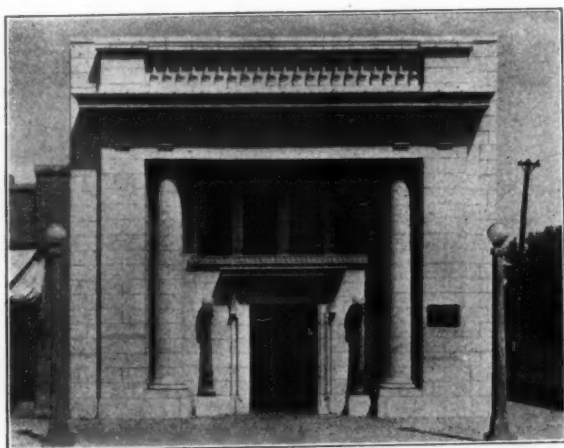


First National Bank, Beardstown, Ill.
E. Jackson Casse Co., Architects

Terra Cotta on these Buildings
furnished by

MIDLAND TERRA COTTA COMPANY

1120 Chamber of Commerce
Chicago, Illinois



Austin National Bank, Chicago, Ill.
Frank M. Pray, Architect

1915 Model Eureka Mortar Mixer

The Eureka Machine Company, 12 Case Street, Lansing, Mich., have dealt "The Man with the Hoe" a telling blow in bringing out their new model "Eureka" mortar mixer. It is hoped that the old, slow, expensive, back-breaking days are over and that with the general use of this power mortar mixer "The Man with the Hoe," long a familiar figure in construction landscapes, will disappear for good.

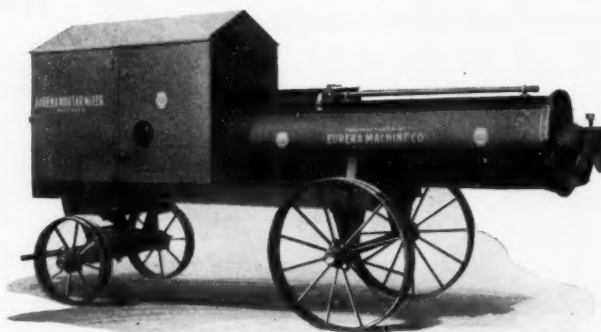
The claim made for the Eureka Mortar Mixer is that it regularly saves from \$15 to \$25 a day in time and material (lime). This certainly sounds interesting—well worth investigating.

Following is a brief specification of the 1915 model illustrated herewith:

Trucks. Channel steel frames are used. Wheels are steel, with grooved tires, 20-inch front and 30-inch rear. Hauled over rough roads or cobblestone pavements with perfect safety.

Bearings. All bearing are genuine babbitt except the two carrying mixing shaft. The Eureka engineers designed these to absolutely exclude mortar and dirt. This adds years to their life,—a feature you will appreciate.

Drum. The cylindrical drum is 6 feet long, 18 inches in diameter and is rolled out of 10-gauge heavy steel plate. It is



View of 1915 Model Eureka Mortar Mixer.

open at the top. A cast hopper is provided at the front end of drum to shovel into. Shoveling height is about 45 inches.

Mixing Blades. Note the distinctive design and arrangement of the removable mixing blades. With these blades making 40 revolutions a minute, a batch is mixed in a jiffy.

Discharge Door. This door is of exclusive Eureka design and will remain open or shut, as desired. Locks itself securely in either position by simply raising or lowering the handle.

Belt Drive. A 5-inch leather waterproof belt transmits the power. An automatic idler engaging the belt allows the mixer to be stopped or started instantly from either side.

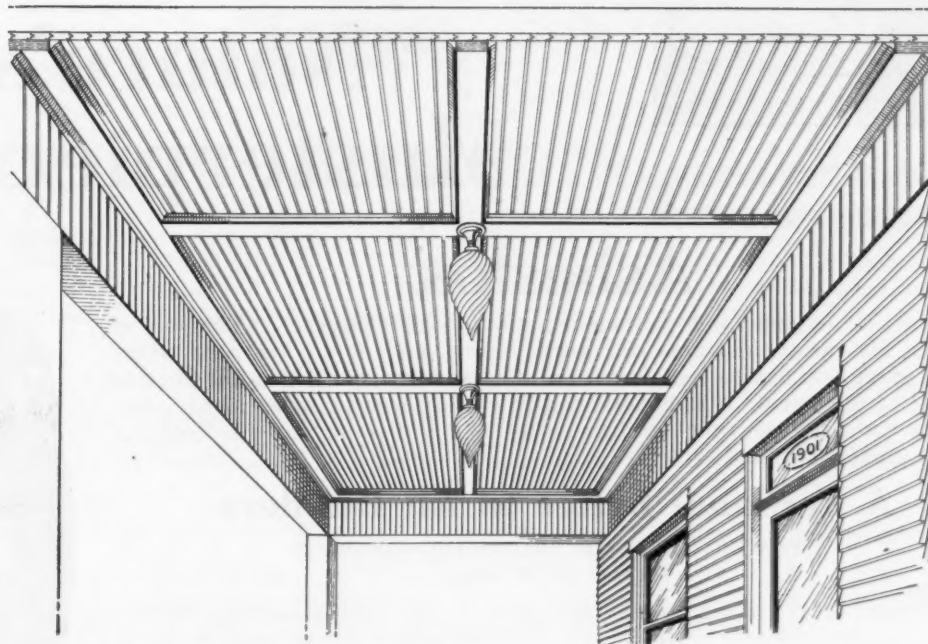
Housing. A substantial steel housing protects the engine and gearing from dirt and weather.

One door in front and two on either side allow quick access.

Power. A "New Way" Standard 4½ H. P. gasoline engine furnishes the power and plenty of it. The "New-Way" engine is known for its high quality and reliable features. Not used by manufacturers who build cheap mixers.

All contractors and builders will be interested to investigate thoroughly the Eureka mortar mixer; also the Eureka line of continuous concrete mixers. The Eureka Machine Company have some very finely illustrated new catalogs which they will be glad to send on request. Address the company at 12 Case Street, Lansing, Mich.

(Trade Notes Dept. Continued to Page 104.)



Why Not A Paneled Porch Ceiling ?

They are *new* and in every way *desirable*.

Take a look at some of the porch ceilings you put up a few years ago. See if they are a credit to you, to the architect, to the wood used, or a source of satisfaction to the owner?

Paneled Ceilings *cost more for labor, cost less for lumber, provided you use*

Arkansas Soft Pine Short Lengths

Construction: By blocking down the cross bars and using a heavier cove or O. G. moulding the depth of the panel may be increased without increasing the cost.

Material: For porches of ordinary width 4 and 5-foot **Arkansas Soft Pine Ceiling** can be used without waste. Short lengths of 4 or 6 inch boards may also be used for the "beams." The quality of short length stock is extra good and the cost is less.

Finish: Stain Forest Green, Light Oak or Fumed Oak, and coat with varnish.

You can get Arkansas Soft Pine Short Lengths from your local dealer. Ask for them.

You can secure valuable information from our Use Book. Send for it.

Arkansas Soft Pine Bureau

1738 Transportation Building

Chicago, Illinois



WYOMING ASBESTOS

"Nature's Masterpiece"

Asbestos

Mention Asbestos and you immediately think *Fireproof*. The use of Asbestos for theatre curtains, for grate linings and as an insulator where there is great heat has made Asbestos the standard fire-resisting and insulating material of the world. The general public's confidence in Asbestos as a fire-proofing material wherever absolute safety and protection are required has made it universally used.

A Personal Letter to All Builders

WYOMING ASBESTOS PRODUCING COMPANY
Office of the President

Gentlemen:—

No doubt all of you are familiar with Asbestos and its fireproof and insulating qualities. Perhaps many of you have often wondered why it was not used in making fireproof building materials. Well, here's the reason. Heretofore, most Asbestos was imported, a good deal of mystery always surrounded it and its cost was very high, too high for it to come in general use.

We are going to enable you to obtain Asbestos Building Products all over this country at no greater cost than any other building material. Think of it, building materials that are positively fireproof, that are better and no higher in cost.

Our large deposits of Asbestos, shipping and mining facilities, combined with the many merits of Asbestos Products, will make them the leading building materials of the world. There's no end to its possibilities. No matter what you build, there is a Wyoming Asbestos Product that will make your building better and lower in cost. I know you will welcome these fireproof, better building materials in the interests of better building and to cut down the enormous yearly toll this country pays to fire.

(Signed)

Fred Patee

PRESIDENT.

Natural Resources

We have an immense deposit of Asbestos Rock, inexhaustible in quantity and extending down hundreds of feet, situated at Casper, Wyoming. This rock is genuine Asbestos interspersed all through with short fibrous Asbestos. The Asbestos Rock is of the same chemical composition as the Asbestos Fibre and possesses the same fireproof and insulating properties.

Wyoming Asbestos Producing Company has the use of large mills for crushing and pulverizing this Asbestos Rock for all building uses. Large warehouses and distributing points are being located to supply the enormous demand for Wyoming Products. Our slogan is, "Better and Fireproof Building at a Lower Cost."

Wyoming Asbestos Producing Company

Building Material Exhibit,

Insurance Exchange Bldg.,

CHICAGO, ILLINOIS



This photograph shows a piece of Asbestos Rock taken from our Wyoming quarries. Notice the white Asbestos fibre running through it. This whole rock is of the same chemical composition as the fibre Asbestos. You can easily see the possibilities for fireproof, insulating and stucco material.





Builders, Contractors, Architects

Builders, Contractors, Architects, Building Supply Dealers and Manufacturers:— The Wyoming Asbestos Producing Company has been organized to bring Asbestos Products into universal use. We have taken the mystery out of the Asbestos Business and with our large facilities have placed it on a basis that will enable you to get Asbestos Building Products at lowest cost.

We offer you Wyoming Asbestos (the crushed rock) Nature's Best material for

Asbestos Stucco for Exterior Walls (can't crack)

Wyoming Asbestos Stucco is guaranteed against cracking, peeling or flaking. It is a non-conductor of heat and cold and withstands all climatic changes. It is rock-hard and non-porous. It is finished ready to mix with water and apply.

Fire-proof Partitions

That are fire-proof, sound-proof and are the minimum in thickness. Will save you valuable floor space.

Asbestos Shingles:

A pure fibrous Asbestos shingle. These shingles are very attractive in appearance and outlast the building. Require no painting and are absolutely fire-proof and are non-conductors of heat or cold.

Asbestos Building Blocks, or Artificial Stone:

Artificial Stone is made of crushed Wyoming Asbestos Rock and Portland Cement; cannot be equaled for strength, lightness and durability. A building constructed of this Artificial Stone is much lower in cost and is just as good looking and durable as if made of stone, and costs less than brick.

Fire-proof Materials:—Plaster Work.

Wyoming Asbestos Plaster makes a superior wall, fire-proof and non-cracking. Simply mix with Portland Cement, no other binder required. The Asbestos Fibre makes a solid, well-knit wall. Solves all acoustical problems.

Plastic Non-Cracking Floors

Made of pulverized Asbestos rock, are light in weight, and possess great tensile strength. Very efficient for school corridors, hotel corridors, factory floors, lobbies, etc.

Asbestos Fire Escapes for all Buildings:

"A Tower of Refuge for Every Building." Safeguard the occupants of every building. These Fire Escapes will stand intact through fire and flame and provide a safe exit for all persons in a building.

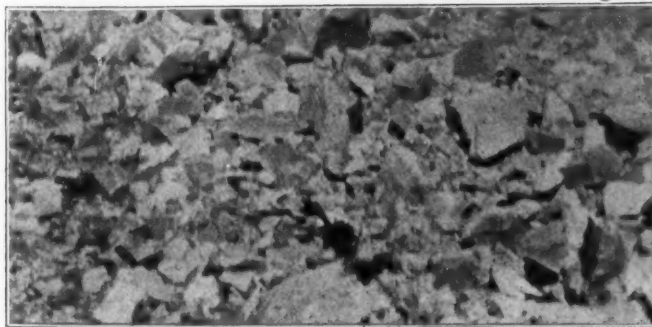
Fire-proof Ready Roofing:

A Roofing material surfaced with Asbestos and especially low in cost. Wyoming Asbestos Roll Roofing is an ideal roofing material for warehouses, factory buildings, railroad stations, etc. It possesses all the fire-proof and insulating qualities of Asbestos.

Insulation and Refrigeration:

Asbestos has long been used all over the world as an insulating medium. Wyoming Asbestos is the best. Especially efficient for jacketing boilers, furnaces, steam pipes, hot air pipes, etc. Also used for Refrigerating Insulation; build your Refrigerators of Asbestos Blocks. Pack your refrigerating pipes with Wyoming Asbestos. It is the greatest non-conductor of heat or cold known.

Send the Coupon



Detail Photo of Asbestos Rock Taken On One of the Dumps As It Comes from the Quarry.

Wyoming
Asbestos
Producing
Company,

Insurance
Exchange Bldg.,
Chicago.

Gentlemen:—
Kindly send me full information and details concerning Wyoming Asbestos Products for Also tell me where I can obtain same in my locality.

Name

Address

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN CARPENTER AND BUILDER

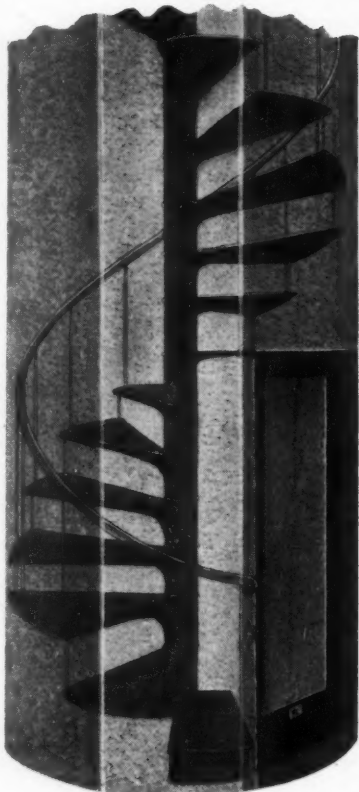


"A TOWER OF REFUGE"

Patent Pending.

for Every Building

The Wyoming Asbestos Fire-Escape



X-Ray View.

Showing construction of Wyoming Asbestos Fire-Escape. A sheet-metal chute can be substituted for stairs where speedy exit is wanted.

There is a big demand for a low cost fire-escape. Every building should have a safe and sure exit. The slogan of the public is "Safety First." Wyoming Asbestos Fire-Escapes solve the problem for every type of building. It is absolutely impossible to destroy this "Tower of Refuge" by any amount of heat or flame. Any builder can construct these Wyoming Asbestos Fire-Escapes.

It is round in shape. Every 16" or 18" is a light steel upright I-beam. Metal lath or metal fabric is fastened on the outside and on the inside. When the Wyoming Asbestos is applied it makes a double wall with a dead-air space between. No matter how intense the heat is or how big the flame, they can never penetrate this double Asbestos Plastered Tower. These Fire-Escapes give the occupants of buildings equipped with them a feeling of safety. They know that no matter how big a fire starts, and that if all their other means of escape are cut off, "The Tower of Refuge" will still be intact and guarantee their safety.

It can be finished inside with spiral non-combustible stairs or sheet-metal chute. We recommend the chute for schools and dormitories because it assures a quicker exit than the stairs.

For Schools, Hotels, Dormitories, Factories, Colleges, Residences, Office Buildings.

We want Agents all over the country to handle the Wyoming Asbestos Fire-Escape. It is adaptable for all kinds of buildings, is low in cost and easily constructed. Write to us for particulars.

Wyoming Asbestos for Insulation

One of the oldest uses of Asbestos is for insulating. Being a non-conductor of heat or cold, it can be used in many ways. Below is a photograph of one of the locomotives of the Chicago & Northwestern Railway, the boiler of which is jacketed with Wyoming Asbestos. After many exhaustive tests the Chicago & Northwestern Railroad are using Wyoming Asbestos as the best insulator to prevent the radiation of heat on their locomotives. If the Chicago & Northwestern Railroad use Wyoming Asbestos on their locomotive boilers, think what a good insulation it makes for furnaces and furnace pipes. It is the best insulation for packing steam pipes, boilers—wherever insulation is needed.

For Refrigeration Purposes

Being a non-conductor of cold as well as heat, Wyoming Asbestos is especially efficient for lining refrigerators. For packing refrigerator pipes, where exposed to heat, etc. Build your ice houses of Asbestos Blocks. An ice house constructed of Wyoming Asbestos Blocks is much easier to put up and a good deal lower in cost. It will have better preserving facilities and be superior in every way. Large refrigerators built of Asbestos Blocks are better and will show a substantial saving in ice.

For Electrical Conduits, Etc.

Wyoming Asbestos is an ideal Conduit material, for electric wires and cables. It is a perfect insulator, preventing electrolysis of metal work, and keeping wires and cables in best condition. Used for both inside wiring and underground work.

If you are a manufacturer and use Asbestos in any shape or form, investigate Wyoming Asbestos. We can save you money and give you a better product.



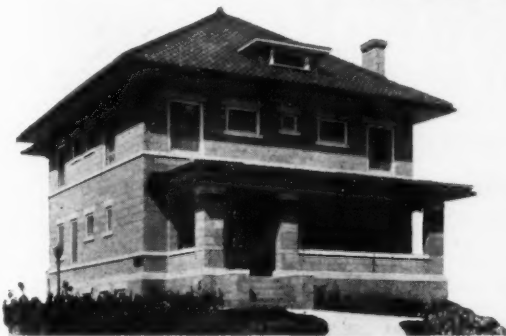
Wyoming Asbestos Producing Company, Insurance Exchange Building, Chicago



Wyoming Asbestos Shingles

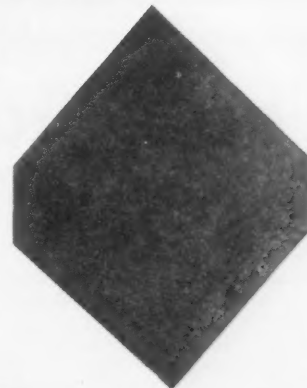
Made of fibrous Asbestos pressed into shingles under high pressure. Here again the Asbestos fibers form a natural bond, producing a tough, elastic shingle that will not crack, tear or split. *Absolutely fireproof.* A durable roofing material, requiring no painting and making a roof that will outlast the building. The insulating qualities of Wyoming Asbestos Shingles keep out the intense heat of the summer sun, keeping upper rooms cool. These shingles are attractive in appearance and will give the maximum amount of service. The lowest cost roofing on the market.

Wyoming Asbestos Building Blocks or Artificial Stone

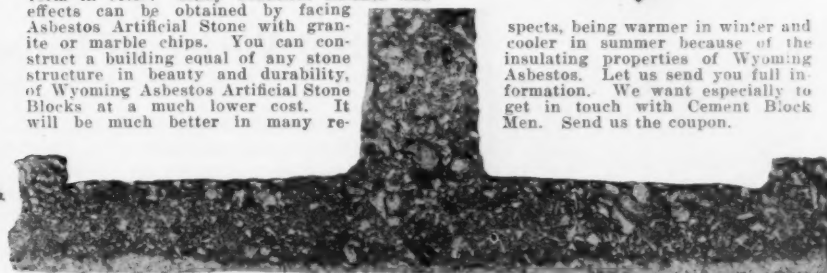


Typical Residence, built of Wyoming Asbestos Blocks. Beautiful, Durable, Low in Cost. A real credit to any builder.

Artificial Stone or Blocks made of crushed Wyoming Asbestos Rock and Portland Cement cannot be equaled for strength, lightness and beauty. Asbestos Artificial Stone is non-porous in nature and absorbs no moisture. Consequently a building constructed of it is absolutely dry all over and therefore uniform in color. Many beautiful finishes and effects can be obtained by facing Asbestos Artificial Stone with granite or marble chips. You can construct a building equal of any stone structure in beauty and durability, of Wyoming Asbestos Artificial Stone Blocks at a much lower cost. It will be much better in many re-



spects, being warmer in winter and cooler in summer because of the insulating properties of Wyoming Asbestos. Let us send you full information. We want especially to get in touch with Cement Block Men. Send us the coupon.



Cross Section of Wyoming Asbestos Building Block.

Partition Tile

That is fire-proof, light in weight, a sound deadener and a space saver. Wyoming Asbestos Partition Tile is ideal for office buildings, schools, etc. Save room space by making your partitions of Asbestos Tile. They are sound-proof and are of minimum thickness. If you manufacture Artificial Stone, Cement Blocks, etc., get in touch with us. We can furnish you better materials at lower prices. See coupon.

Wyoming Asbestos Roll Roofing

This Roll Roofing is absolutely fire-proof and possesses the same insulating qualities as other Wyoming Asbestos Products. It is very durable and especially recommended for roofing warehouses, factory buildings, and wherever good, serviceable, low cost roofing is wanted. We also recommend Wyoming Asbestos Roll Roofing for farm buildings and sheds. It also makes a good roofing for freight houses and railroad stations. Learn more about this roofing material by sending us the coupon.

Dealers and Manufacturers

There is a great and growing demand for Wyoming Asbestos Products. Builders all over the country are asking for Wyoming Asbestos. Plans for the perfection of the biggest distributing system of building materials are under way. If you are a building supply dealer, get in touch with us. Wyoming Asbestos Products will make a New Era in Building Construction. Structures built of Wyoming Asbestos Products guarantee real fire protection and permanency. Because of their low cost and high quality Wyoming Asbestos Products will become the leading building materials of the time. If you are a dealer, get in touch with us right away so that you can reap the benefits of the growing demand for Wyoming Asbestos Products. Manufacturers should also get in touch with us; we can furnish Asbestos, Crushed Asbestos Rock, Asbestos Fibre and Pulverized Asbestos for all purposes. Get in communication with us.

Special Coupon for Dealers and Manufacturers

Wyoming Asbestos Producing Co.:

Gentlemen:—

Insurance Exchange Bldg., Chicago.

Kindly send me full information about Wyoming Asbestos Products their uses, their cost. Also send me full information for dealers, tell me about future publicity plans and how I can secure territory.

Name.....

Address.....

Name

Address

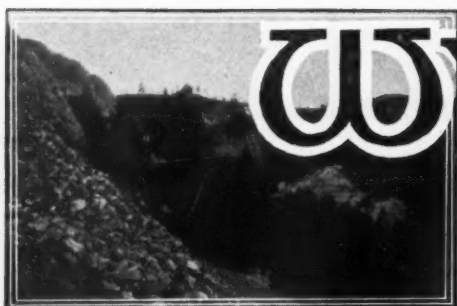
--Coupon--

Mark with X

Wyoming Asbestos Producing Co.,
Insurance Exchange Bldg., Chicago.

Gentlemen:—

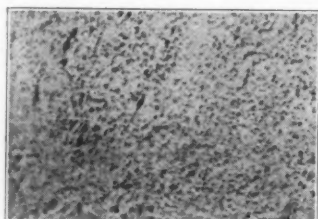
I am interested in the Fire-Escapes, Insulation, Asbestos Shingles, Artificial Stone, Partition Tile, Ready Roofing. Kindly send me full information about above Asbestos Products.



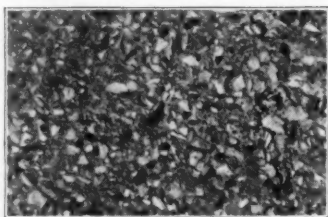
WYOMING ASBESTOS STUCCO

The Stucco that will not Crack

We absolutely guarantee Wyoming Asbestos Stucco against cracking. Its fibrous nature insures a perfect, natural bond that will not crack, flake or peel off. This same fibrous nature guarantees an elasticity impossible to obtain with other stucco materials. Wyoming Asbestos Stucco acts as insulation and is a non-conductor of heat or cold. This keeps a building cool in summer and warm in winter. A building finished with stucco is without comparison, the soft, rich colors obtainable only with stucco have made this the popular finish of the times. Besides making a house distinctive in appearance and giving it a tone of dignity, it saves the owner money. There is no up-keep costs to a stucco house in the way of painting. This is the big item on frame houses. Wyoming Asbestos Stucco can be applied on frame buildings, hollow tile buildings, cement, stone or brick. Wyoming Asbestos Stucco is easily applied, no puzzling formulas or bunk in its make-up. Just mix good Wyoming Asbestos Stucco with Portland Cement and apply. We guarantee Wyoming Asbestos Stucco against cracking, flaking or peeling.



Stippled Effect.



Rough Cast Granite Float.

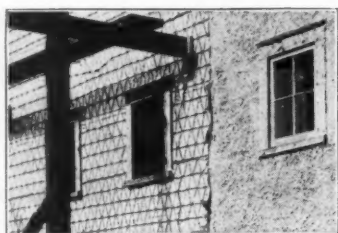


Illustration showing how easily Wyoming Asbestos Stucco is applied as overcoating on clapboards. Simply nail on chicken wire or metal fabric and apply. A Durable, Lasting Finish is the result.

**Wyoming Asbestos
Producing Company,**
Insurance Exchange Bldg.
CHICAGO, ILL.

A Big Variety of Durable, Beautiful Finishes

Notice the photographs of Wyoming Asbestos Stucco Finishes. Now imagine these panels beautifully colored with soft, rich tones of granite or marble, or any other of the pleasing finishes obtainable. Wyoming Asbestos Stucco is particularly adapted to receive all kinds of surfaces and finishes. Any surface applied to Wyoming Asbestos Stucco becomes an integral part of the stucco and will never come off under the most severe climatic conditions. All the popular finishes, such as Stippled Effect, Rough Cast, Granite Float, Pebble-dash, etc., are easily applied on Wyoming Asbestos Stucco.

Absolutely Fireproof

It goes without saying, Wyoming Asbestos Stucco is fire-resisting. Finish your frame houses with Wyoming Asbestos stucco. It will provide an over-coating that will protect the frame structure beneath from fire. Talk this to your customers putting up frame buildings. It will be giving them a protection against fire, save them up-keep costs, make a better appearing building, and lower insurance rates.

Lowest in Cost

Our immense facilities and methods of producing stucco make it so low in cost that it can easily take the place of paint. Don't forget this point. A durable, pleasing finish of stucco at a cost scarcely more than a good painting job. You can build up a nice little business in your locality remodeling buildings by over-coating with Asbestos stucco. These buildings will look so new and different in appearance that they will be hard to recognize as old structures. Only ordinary chicken wire is required to apply a coat of Wyoming Asbestos Stucco. Simply nail chicken wire on clap-boards, and put on stucco.

Charming Little
Residence finished
with Wyoming
Asbestos Stucco





Fireproof Partitions—Wyoming Asbestos Plaster on Metal Lath. Elevator Enclosures. Space-Saving, Partitions for Office Buildings, Hotels, etc.

Make All Your Plaster Work FIREPROOF

Here is a striking illustration of fireproof plaster on metal lath construction that passed through this big fire unscathed. Make your elevator enclosures and partitions doubly sure of resisting fire and water by plastering with Wyoming Asbestos Plaster. This Plaster is very easily applied on either metal or wood lath. Wyoming Asbestos Plaster is easily mixed, simply mix Asbestos Plaster with Portland Cement. It requires no other binder. The fibrous nature of the Asbestos Plaster making a natural bond. This simplifies Plaster making and saves considerable time. Absolutely no wood fiber or hair required. We deliver Wyoming Asbestos Plaster already mixed with the proper amount of Portland Cement.

Why Wyoming Asbestos Plaster is the Best

An Asbestos Plaster Wall cannot crack from extreme heat, from vibration, dampness or by bringing it in direct contact with flames. Here again Asbestos acts as an insulator, keeping out the winter cold and the summer heat. It also is the greatest sound deadener known, absorbing sound waves but not conducting them. This makes it especially valuable for hotel partitions, school rooms, etc. Plaster all your interior walls with Wyoming Asbestos Plaster, it means a better wall, a better building. Wyoming Asbestos Plaster guarantees fire-proof construction and permanency.

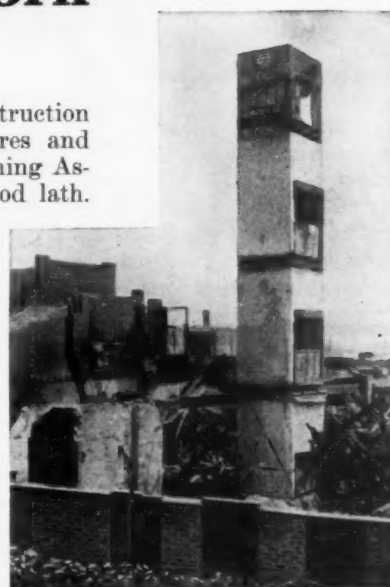
For Acoustical Reasons

Churches, Auditoriums, Halls, and Theatres plastered with Wyoming Asbestos Plaster is safeguarded against acoustical (echo) troubles. The structure of an Asbestos Plaster wall accounts for this. These Asbestos fibers in the plaster produce a surface that absorbs sound waves instead of reflecting them back. Here is an opportunity for all builders to remedy faulty acoustics in Churches, Halls, etc., by plastering them with Wyoming Asbestos Plaster. Here is a new field open for you. Get in touch with us. We'll tell you all about it. There's big money in this.

For Plastic Composition Floors

Wyoming Asbestos Rock pulverized and mixed with Portland Cement makes an ideal hard floor, lighter in weight than concrete or any other plastic floor. It is easily laid, very elastic and possesses great tensile strength. These floors will withstand hard trucking and are easily kept clean. (Will not contract or expand from heat or cold.) We recommend Wyoming Asbestos Plastic Floors for hotel lobbies and corridors, school corridors, factory floors and wherever a good, substantial floor, light in weight and low in cost, is desired. Wyoming Asbestos Plastic Floors are absolutely fire-proof and non-conductors of heat or cold.

Building Supply Dealers and Manufacturers—Investigate Wyoming Asbestos Products. The building materials for permanency.



Special Coupon

Wyoming Asbestos Producing Company,
Insurance Exchange Bldg., Chicago.

Gentlemen:—

I am interested in Wyoming Asbestos Stucco and Asbestos Plaster, Wyoming Asbestos Plastic Floors. Kindly send me full information and details about the above. Also tell me where I can obtain same in my locality.

Name.....

Address.....

.....

New Style Plier

Among the newest items in the tool line is the "Diamond Edge" box joint side cutting plier, a new product of the Shapleigh Hardware Co., St. Louis. This tool has several advantages over the ordinary slip joint plier. The jaws—



"Diamond Edge" Side Cutting Plier

where all the work is done—are supported equally on both sides of the plier, there being no one-sided ties or strain on the rivets or bolts when ripping or cutting. This does away with the large headed bolt or nut.

The jaws are so constructed that they will adjust themselves to any size. This construction gives great gripping power and strength. It will do all the work of the parallel plier and many things such a plier will not do. Made in two lengths, 6 and 8 inches, of the highest grade material obtainable for tools of this kind.



Special on Pearson Nailers

The Pearson Mfg. Co., Robbinsdale, Minn., desire to extend greetings of the season and wish their friends, the carpenters and builders, a very prosperous New Year. The Pearson Nailers and Tackers are on the job, and the manufacturers thank you for your co-operation during this year, which now so soon draws to a close. They are making a special offer for the next thirty days to include with the shipment of every nailer or tacker a very useful and valuable present: "a fine carborundum pocket knife and chisel sharpener" with rounded corners, the cutest little thing you ever saw.

These nailing implements would in themselves make a fine

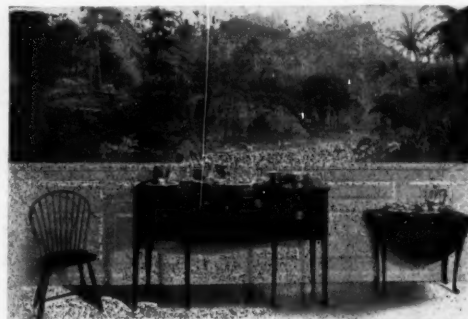
Christmas present for your friends as well as for yourself.

Mr. A. M. Richey, carpenter and builder, writes the Pearson Mfg. Co.: "I received your shingle nailer all O. K. and have tried it out. It is all you claim of it. The only trouble I find, is that it is hard to get a man to lay the shingles as fast as I can nail them."



New Wall Board "Fiberlic"

Every carpenter, contractor and builder realizes that a pleased home owner is about the best advertiser he can have. For that very reason most men in the building business are continually on the lookout for new and better methods and materials for building.



"Fiberlic" Wall Board Used as Decorative Panel in Dining Room—the Effect is Bright and Cheerful

Of late years, wall board has perhaps been of more down-right service to both owner and carpenter than any other material.

Most builders are now sharply alive to the fact

that quick, clean, lasting work and wall board go hand in hand.

The manufacturers of "Fiberlic" wall board, through their chemists, discovered some years ago that the pulp of a certain root produces a board that is extra strong and rigid.

You can't buy a Kissel Kar Truck unless you need it

IF, after careful analysis, we can satisfy **you** that Kissel Kar Trucks will save money in **your** business, we will feel that we have earned the right to solicit your order.

If, on the other hand, we cannot show you in figures that trucks will benefit you, we will advise you, not only not to buy, but just why you shouldn't?

KISSEL KAR TRUCKS

Kissel Kar Trucks are built in six sizes—1500 lbs., 1, 1½, 2½, 3½ and 6 tons—bodies to suit. May we investigate your haulage system?

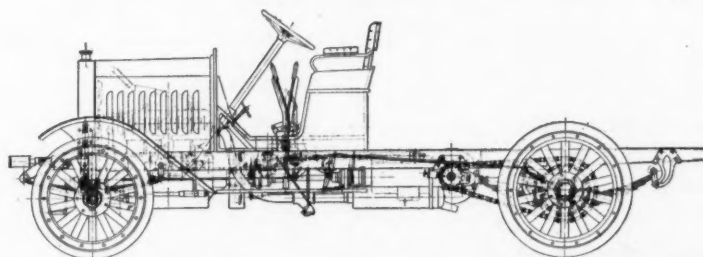
Let us refer your name to our nearest agent. At the same time we will mail you our truck portfolio with 350 illustrations—it's worth looking over.

Kissel Motor Car Co.

546 Kissel Avenue

Hartford, Wis.

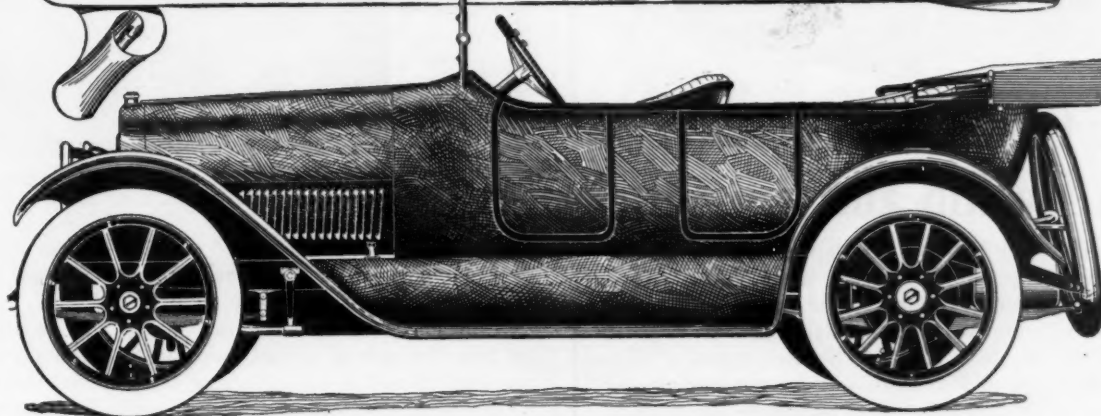
New York St. Paul Boston Los Angeles
Minneapolis Philadelphia Kansas City Milwaukee
Chicago San Francisco St. Louis Dallas
and 300 other leading American and Canadian points



*The result of
22 years' successful
experience in
building motor cars*



America's Greatest "Light Six" \$1485

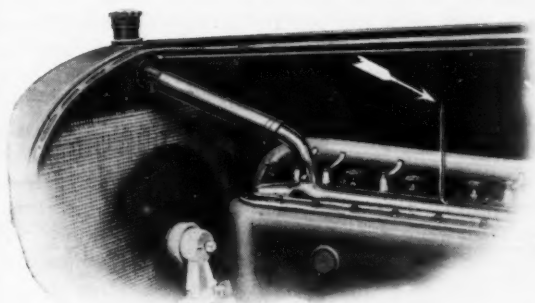


5-Passenger Touring Car

2-Passenger Roadster

Absolute Freedom from Vibration

Here is an actual photograph of America's Greatest "Light Six" motor running at 1500 revolutions per minute—equivalent to a car speed of 37 miles per hour—with an ordinary lead pencil *standing upright*.



This proves conclusively that the motor is *perfectly balanced and absolutely free from vibration*.

Freedom from vibration insures longer life for the motor, additional comfort for the passengers and indicates the high quality of workmanship.

A drive in America's Greatest "Light Six" is a revelation of its remarkable power, flexibility and Pullman-like riding qualities.

**The
Haynes Automobile Company**

14 South Main Street
KOKOMO, INDIANA

**Write for name
of our nearest
distributor.**

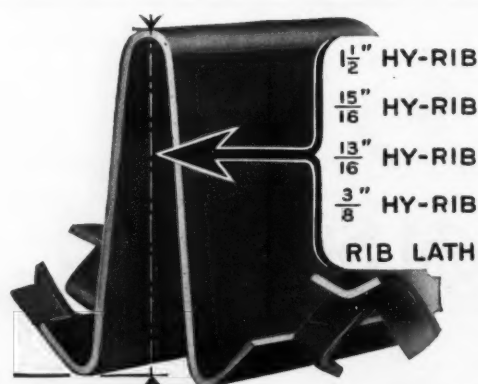
**THE
HAYNES
AUTOMOBILE
COMPANY,
14 South Main Street,
Kokomo, Ind.**

Please send me your 1915
catalog with full particulars in
regard to America's Greatest "Light
Six."

Name.....

Address

I expect to buy a car about.....



You Choose the Right Depth In Hy-Rib and Rib Lath

Specify Hy-Rib by its depth—for you can choose the depth of ribs that most closely meets your exact requirements. Our complete line includes all depths from flat Rib Lath to Hy-Rib with $1\frac{1}{2}$ in. deep ribs—4 distinct types of Hy-Rib—3 types of Rib Lath—all in various gauges—The correct material is thus assured at an economical cost for every possible use in building construction.



Hy-Rib is a unit of forms, reinforcement, lath and studs.

—Partitions of Hy-Rib

require no stiffening channels nor expensive wiring, occupy only two inches increase floor space, and are fireproof and economical.

—Roofs of Hy-Rib

are built of concrete without forms, are light in weight, save in structural supports, and have great strength and rigidity.

—Walls and Sidings of Hy-Rib

are monolithic concrete costing half of brick, are only two inches thick and add fully a foot to interior dimensions.

—Ceilings of Hy-Rib

save money by eliminating channels and wiring, require only two plaster coats instead of three and economize time and labor.

—Floors, Furring, Tanks, Culverts, etc.

In all structures Hy-Rib saves money, improves construction and assures fireproofness and permanence.

If interested in any construction, write for Hy-Rib Handbook and suggestions for your particular work—FREE.



Trussed Concrete Steel Co.

Reinforcement, Metal Lath, Steel Sash,
Armor Plates, Waterproofings, Specialties

Dept. H-44, Youngstown, Ohio

Representatives in Principal Cities

It was also decided that any wall board, to endure and become a staple building material, must have the broadest range possible of uses. For that reason the "Fiberlic" board has been produced in $\frac{1}{8}$, $\frac{1}{4}$ and $\frac{1}{2}$ inch thicknesses.

The $\frac{1}{4}$ and $\frac{1}{2}$ inch board permits of wall board use in construction

where the ordinary board could not possibly be used.

The first illustration shows nearly the entire side wall of a Salem, Mass., home, built from one solid panel of $\frac{1}{4}$ inch "Fiberlic" wall



The Use of "Fiberlic" Wall Board is not Restricted to Small Buildings—this Hotel Illustrates the Fact

board. As an illustration of the builders' faith it may be pointed out that the room was papered with an imported French paper costing \$200.00 a roll!

A further proof of "Fiberlic" worth and superiority is the fact that if it is applied properly and carefully it is unnecessary to nail down the centre of "Fiberlic" panels.

The second illustration shows unusually large panels that have been nailed only at the edges. At the same time this picture indicates the high type of buildings that now employ "Fiberlic" wall board in preference to lath and plaster.

It is interesting to note that "Fiberlic" users have discovered several new and astonishing uses for it. In Wisconsin, it has been used instead of clapboarding for frame houses. It is cheaper and warmer and it seals the house perfectly. Panels heavily painted have been used to line silos with absolute success and this we believe is an unique test as to the durability and moisture proofness of wall board. It has been used under hardwood floors to deaden sound. It has been used to erect quick and sanitary partitions in dairy barns and for the building of stalls. In fact, with the $\frac{1}{4}$ and $\frac{1}{2}$ -inch board at hand, there is the greatest possible range of uses; and the wise builder will save time and money and delight his customer by using such a wall board wherever possible.

In view of the fact that "Fiberlic" has been so successful, due without question to its extremely careful manufacture, we believe that contractors and builders will find it of enough interest to write for samples and literature which will be gladly furnished by McAndrews & Forbes Company, Camden, N. J. Address, Builders' Department, Desk A.

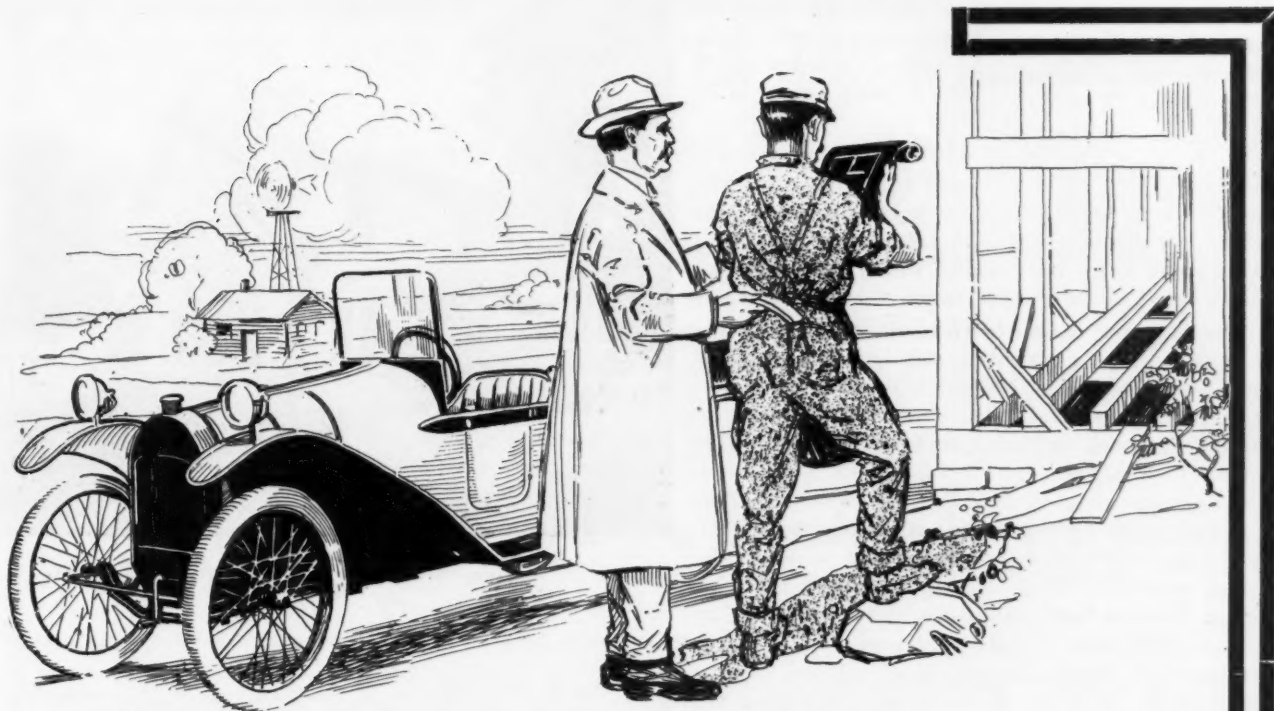


Michigan Builder Discovers How to Put up a Better House for Less Money

All the contractors and builders around Jackson, Mich., are pretty much excited over the new residence of Mr. J. R. Wright, which has just been completed by one of the local contractors. It is a well-built frame house, following ordinary approved construction in every respect except that in place of the wood sheathing boards, large square sheets of "National" brand plaster board are used.

We show on page 108 a photograph of the construction showing the plaster board sheets nailed right to the studding. The beveled siding is nailed on over the plaster board, the nails penetrating right through to the studs. No building paper is needed, as there are, comparatively speaking, no cracks to cover.

The builders around Jackson are enthusiastic about this new building method, as they say it makes a warmer and more wind-proof wall. Also there is considerable saving in



VIXEN

A CONTRACTOR'S CAR

Haven't you as a Contractor and Builder often wished that you could get a car for your own individual needs? Not a big, heavy car that consumes large quantities of gasoline and oil and costs quite a sum to keep up. You want a car to get around the different jobs with and one that will carry a man or two besides. Well, we have designed just the car you want. A sturdy, rugged, light car that is a wonder for low cost of operation and up-keep. A car built of best materials, high grade and up-to-date in every detail.

ONLY ONE CENT PER MILE

Speedy and convenient transportation for only one cent per mile. At such a low cost you'll agree with us that the Vixen Light Car is especially adaptable for Contractors and Builders. Think how you could get about with a Vixen. The jobs away out in the country would be only a few minutes away. Think how easy it would be to take men out to the job, to shift them around without loss of time. With the Vixen selling at such a low price and operating cost reduced to the minimum you cannot afford to be without this car.

SPECIFICATIONS

Power Plant—This is our pride. Four-cylinder, four-cycle. Thermo Syphon Water Cooled. Cylinders Cast en Bloc. All valves enclosed. Rated at 12 H. P., but easily develops 16 H. P.

Ignition—Atwater Kent, separate battery.

Tires—28 x 3 Clincher. (No large tire expense with a Vixen.)

Springs—Front, double semi-elliptic. Rear, coiled-radius cantilever. Very easy riding, absolutely no rebound.

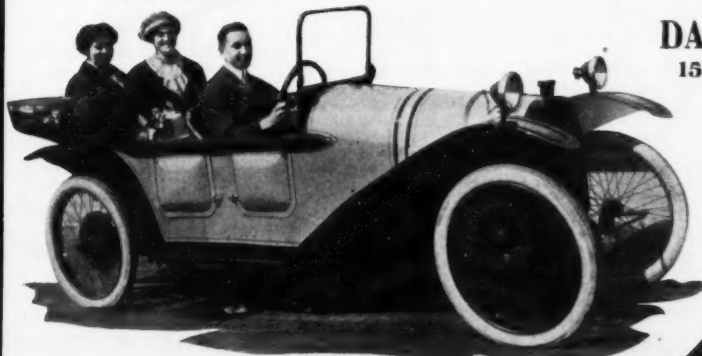
Seating Capacity—Three persons (two in rear seat). Plenty of room.

Lamps—Electric, front and rear, storage battery.

Equipment—All cars are shipped complete with electric lamps and horn, tools, pump, top, envelope and glass windshield.

EARN YOUR OWN CAR

You Contractors and Builders go about communities probably more than anybody else. Why not be our rider agent? When your neighbors see you driving this silent-running, nice-looking car day after day they will want one and you can be the one to take their order. There will be a handsome profit in it for you and absolutely no trouble or inconvenience. These cars become very popular wherever introduced. Every car sold in your locality will be sold through you and you will reap the benefit of the Vixen popularity. Send us the coupon for full particulars about this wonderful car.



DAVIS MFG. CO.

15th and Park Aves.
MILWAUKEE,
WIS.

COUPON

DAVIS MFG. CO., 15th and Park Aves.
Milwaukee, Wisconsin
Gentlemen:—Please send me booklet fully illustrating and
giving complete specifications of the Vixen Light Car.
Also tell me how I can earn my own Vixen.

Name

Address

expense, as the plaster board is cheaper per square of superficial area than the same amount of $\frac{7}{8}$ -inch boards. Also the labor item is very much smaller, as the plaster board comes in large sheets, 32 by 36 inches, and is nailed on in a jiffy.

Mr. Wright's house is one of the first near Jackson to be constructed in this way, though in several other localities "National" brand plaster board has come to be very popular for this use. It is a construction thoroughly recommended by the manufacturers of this gypsum product, the National Plaster Board Company, Cleveland, Ohio.

"National" brand plaster board is, of course, well known as a modern lathing material for all inside plaster work. The best builders and architects like to use it because of its light weight, great tensile strength and its fireproofing, cold insulating and sound deadening properties. The boards run in thickness from $\frac{5}{6}$ to $\frac{3}{8}$ inch. All of these good properties are appreciated by home owners. As compared with walls of wood lath and plaster, the price is right and a better job is produced. Now, added to this already established use of "National" brand plaster board for all plastered walls comes this new use, taking the place of wood sheathing under clapboards. As the contractor remarked when finishing up Mr. Wright's house, "This proposition means better work for less money. It is going to be a fine thing for us builders around Jackson."

It is an interesting fact that 27 per cent of the fires in the United States occur from outside causes beyond the control of the home owners. That houses constructed as indicated in the photograph, using plaster board on the outside as sheathing and inside as lath, are practically fireproof has been amply



Photo of Jackson, Mich., House Sheathed with National Plaster Board.

proven by severe tests. Fire being unable to attack both sides of the other wood siding soon dies out.

Another fact proven by scientific tests which merits the attention of the carpenter, contractor and prospective home builder is that interior partition walls and ceilings constructed of plaster board and plaster are more than three and one-half times as sound-resisting as those of wood lath and plaster.

We are sure our readers everywhere will be interested in this. Drop a line today to the National Plaster Board Company, Cleveland, Ohio.

Last Call for WEATHER STRIP

Don't delay—write now and get all the weather strip business in your locality by handling

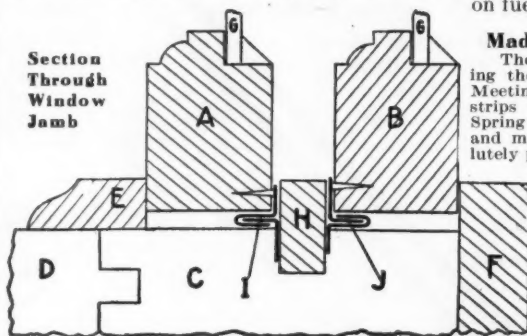
GOLDEN METAL WEATHER STRIP

The time is ripe; people are beginning to want protection against the cold winds and drafts of winter. Naturally they go to you carpenters and if you can give them a neat and finished job at a reasonable price you will soon have all the weather strip business in your section. The Golden Metal Weather Strip is not a new strip or experiment, but an old and tried weather strip. Has been on the market for over 12 years. Golden Metal Weather Strip Guarantees a first-class job and you can do the work reasonable, because as our Agent you will get your Weather Strip wholesale.

Adaptable for All Buildings

Millions of feet of Golden Metal Weather Strip are giving satisfactory service on large office buildings, hospitals, schools, residences, etc., year after year and saving the owners money on fuel bills and excluding cold-dust and soot.

Section
Through
Window
Jamb

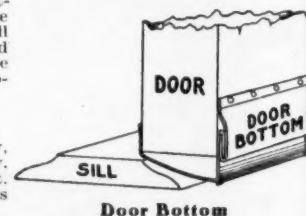
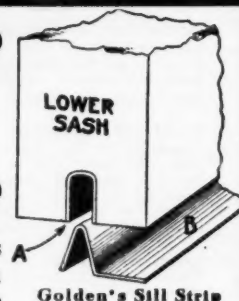


Made of Two Indestructible Metals

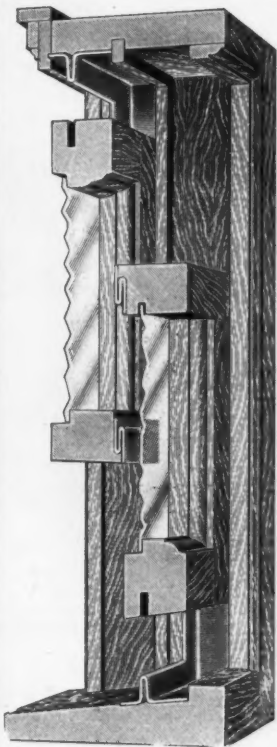
The standard metal for sliding window excepting the meeting rails is made from zinc. The Meeting Rail Strip, Casement Window strip and all strips used for Doors are made from tempered Spring Bronze. Two Metals that are non-corrosive and most durable. They are invisible and absolutely prevent windows from rattling.

Your Last Chance

Write to us and secure your territory, here is a chance to make some extra money. The Weather Strip season is on in full blast. Get in on this. Write for FREE Samples and full information.



Michigan Engine Valve Co., 115-117 W. Columbia
DETROIT, MICH.



MR. CARPENTER AND BUILDER:

Do you wish to substantially increase your yearly income?

GOOD! Now we can talk business

PERHAPS in your town or county where you are acquainted and now doing business, our metal weather strip is not represented.

WHY NOT TRY to secure the exclusive right of furnishing and installing our metal weather strip in your territory.

YOU buy the strip on the per foot basis and install same at a handsome profit.

Our weather strip is the easiest sold on the market

Because—It is the strongest and gives greatest protection.

The meeting-rail strips are double nailed and tight.

Our spring bronze is extra heavy gauge and straight. NO KINKS.

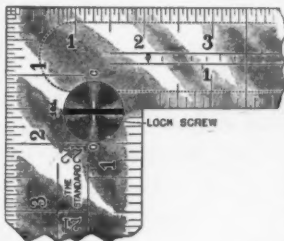
The All Brass Threshold has conquered the door bottom problem.

When writing for our proposition—tell us something about yourself, also territory desired.

NIAGARA METAL WEATHER STRIP CO.

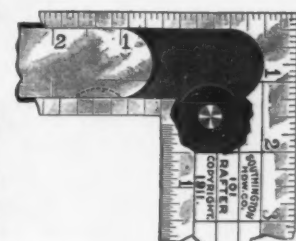
737 Main Street

BUFFALO, N. Y.



The "STANDARD" Take-Down-Square

is the most satisfactory take-down-square that has been produced; satisfactory to the user because when "locked" the tongue cannot slip; easily and quickly taken apart or put together.



Ask your nearest dealer about it—But send for our NEW BOOKLET describing it.

The Southington Hardware Co.

SOUTHINGTON, CONN.

PULLMAN All Metal Weather Strip

can be depended on to do the work. The large amount of Pullman All Metal Weather Strip in use all over the country is ample proof of its superiority.

Exclusive Territory

Write and secure your territory for Pullman All Metal Weather Strip. We give you attractive prices enabling you to make a handsome profit on each job. Write to us today.

Pullman Metal Weather Strip Co.
22 York Court :: :: YORK, PA.



A Portable Closet For Contractors and Builders—

The Hypco Aseptic Closet

Low in price—Sanitary—Durable—Easily transported from place to place.

Beats the usual filthy hole-in-the-ground-with-a-fence-around-it-and-a-rail-to-sit-on-privy in which the user is exposed to all sorts and conditions of weather.

Equally adapted for use in the best modern home where sewerage is not available.

We have room for some more good agents.

The Hygienic Promotion Company, (Inc.)
279 John R. Street, Detroit, Mich.

OUR AGENCIES ARE ALWAYS BUSY

Diamond Flexible All Metal

WEATHER STRIP

Has built up a permanent, profitable business for Contractors and Carpenters in all parts of the country. If you have not secured an agency Get busy at once. Some fine territory still open. The thousands of satisfied users testify to the superiority of our strip.

Diamond Flexible Metal Weather Strips

are easier to sell than the old style rigid strip because they are so much better in use—and it doesn't take much argument to convince owners why they're so much better. Carpenters and Builders can develop a big business selling these. \$3,000 to \$5,000 a year is quite possible, because every purchaser of Diamond Strips will be so satisfied that he will gladly boost them to other owners and tenants.

Diamond Weather Strips mean so much more added comfort that no prospective purchaser will begrudge their small price.

Every Door and Window Needs a Diamond

Where Diamond Strips are used the windows don't stick or bind, and the sash can be removed when necessary without displacing the Flexible Weather Strip. Another thing is that all openings are made air tight and wind, dust, moisture and noise hasn't a chance to get in. They have been known to effect an economy of from 20% to 40% in fuel alone, because less heat is required in rooms protected by Diamond Weather Strips.

And it's not only residences that use them. Large public buildings—schools, churches, hospitals, etc., are always in the market for these products. We make all kinds, suitable for all styles of windows and doors.

Being made of zinc and highest grade spring bronze, they never rust, and last for years. Can be put in old buildings as well as new ones.

Description of Cuts

Top cut—The dotted lines show the flexible and adjustable features. Center cut—This section shows how sash and strip can be removed at the same time. Lower cut shows the Diamond Metal Weather Strip in place.

Write today for our Booklet "Diamond Way of Practical Weather Stripping."

It's of Interest to Everyone Who Owns a Building

The Diamond Metal Stamping Co.

626 Kerr Street

Columbus, Ohio

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN CARPENTER AND BUILDER

Recovering Old Wood Shingle Roofs

This is the time of the year for roof repairs, the fixing of everything snug and tight against the rain, snow and cold weather. A great many roofs will require a whole recovering. Nothing is better for this work than the Walter's and Cooper's interlocking metal shingles made by the National Sheet Metal Roofing Company of Jersey City, N. J.

These shingles can be laid right over the old wood shingles,



Old Wooden Roof Covered Over with National Sheet Metal Shingles.

doing away with the mess, annoyance and expense of the removal of the old shingles, and in not having to strip the old shingles off saves the interior of the building from any outside damage while the new work is being done.

The cost of removing old shingles is approximately that of laying the new ones so that by using W. & C. shingles about half the expense is done away with at once, and the fact that these shingles cost no more in the first instance than wood shingles means that there is a decided saving to be had through their use. W. & C. metal shingle roofs put on thirty years ago are still in service and haven't cost the owners a cent in renewals or repairs in all that time. These are not isolated cases, but stand as a rule.

The fact that these shingles require no special tools, no fire pot, tongs, seamers, mallets, solder or the like and that highly skilled labor is not required for laying, makes W. & C. shingle work highly profitable and well worth an extra effort to secure.



A Practical Present

This season of the year is particularly interesting to carpenters.

Christmas must bring to them (whatever their religious convictions) at least the realization of the antiquity of their trade.

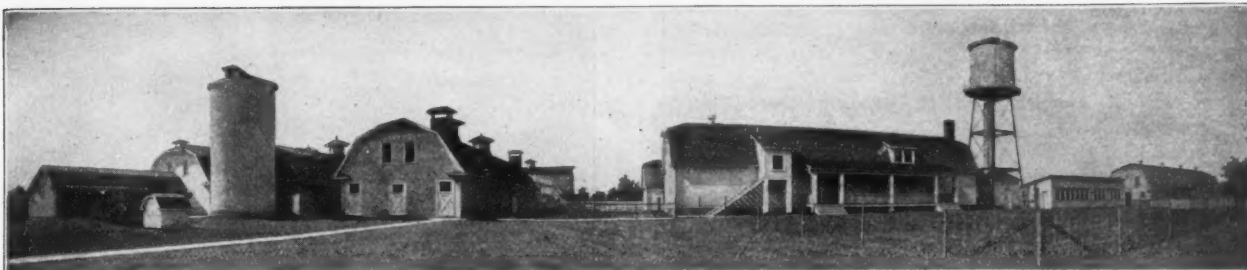
But the carpenter today works under conditions entirely different to those existing 2,000 years ago.

For instance, there is concrete construction, where the main part of the carpenter work is only put up to pull down. Yet it is perhaps the most vital part of the whole job, for the final strength of the building depends on the accurate dimensions and placing of the forms which are to hold the concrete until it is set.

The tremendous change of conditions has been more marked in the past twenty years than in all the rest of the period put together and today many tools which would have been good enough twenty years ago are hopelessly out of date.

Carpenter work is brought into close touch with steel construction as well as concrete construction and coming down to hammers, what carpenter will hesitate to use his nail hammer on either concrete or steel in a pinch?

Two years ago the Van Doren Manufacturing Company



(Louden-Planned Barns at Moline, Illinois)

GET INTO THE BARN BUSINESS

While city folks are worrying about the High Cost of Living, the farmer is smiling over the High Price of Farm Products, and telling Mary that "We'll build that new barn now".

WHAT ARE YOU DOING?

The Louden national advertising Campaign is interesting thousands of farmers in new barns, Modern Barns—**Louden Barns.**

GET BUSY BUILDING BARNs!

We've been specializing on barns for nearly half a century, and never before has there been such an opportunity for the carpenter of the small town as there is right now.

Write and ask us how to get into this money-making field. Let us help convince your farmer friend that what he needs is a Modern barn—a Money-Making barn—a barn that will be a constant pride as well as economy. As for you—

Build a Modern barn under Louden guidance and you will build a monument that will stand as a LIVE, FORCEFUL advertisement of your Ability as a Builder.

Fill in the attached coupon with names of farmers you think will build or SHOULD build, and We'll start things MOVING.

**STEEL STALLS—
LITTER AND
FEED CARRIERS—
BARN DOOR
HANGERS—
HAY TOOLS.**

Louden Machinery Company

(Est. 1867)

5500 Fourth St.

FAIRFIELD, IOWA

Louden Machinery Co.,
5500 Fourth St., Fairfield, Iowa.

Please give me full information regarding your Barn Building Proposition.

I believe the following named persons are prospective barn builders:

Mr.

P. O. State

Mr.

P. O. State

Mr.

P. O. State

Mr.

P. O. State

Mr.

P. O. State

Signed

P. O. State

Certain of Good Results

You are certain of satisfactory results when you use CERESIT, the dependable waterproofer for cement.

You know positively that a stucco residence will not be damp—that a basement will not be leaky—that a culvert will not disintegrate—that a sewer will withstand the constant action of water outside and in—and that under hydrostatic pressure, a water tower—or a swimming tank will be permanently waterproof.

You use Ceresit with confidence—for Ceresit has been proved under all conditions of dampness and water pressure to be thoroughly reliable.

Ceresit is a milk-white paste. It is dissolved in the water used for tempering the concrete or cement mortar. The water carries the Ceresit into every portion of the mass.

Write for the "Book of Evidence"
—it tells all about Ceresit

Ceresit Waterproofing Co.

910 Westminster Bldg.

Chicago



FREE!

**To Contractors Who
Build Dairy Barns**

This Valuable Reference Book

Here's a 126 page pocket size book bound in durable Keratol leather—packed from cover to cover with information that's bound to save you time and money. The "How Book" for Contractors is yours free of all cost if you'll write for it and give us the names of folks in your neighborhood who are going to build new barns—remodel old ones or put in concrete floors.

Pocket Size—Encyclopedia Contents

The "How Book" for Contractors tells how to figure life, strength and quantities on all kinds of building materials. Safe loads—bending stresses, crushing strength—timberweights—waste—shrinkage—roof pitches—labor costs in roofing, carpentry and masonry work, etc.—tells how to figure them all. It's a ready reckoner too—compiled from authoritative sources. A wealth of practical, usable, every-day information that you as a contractor can't afford to be without. And it's free to you. Write for it. Our drafting department is at the service of our contractor friends. We furnish special blue prints for your customers at no cost to you.

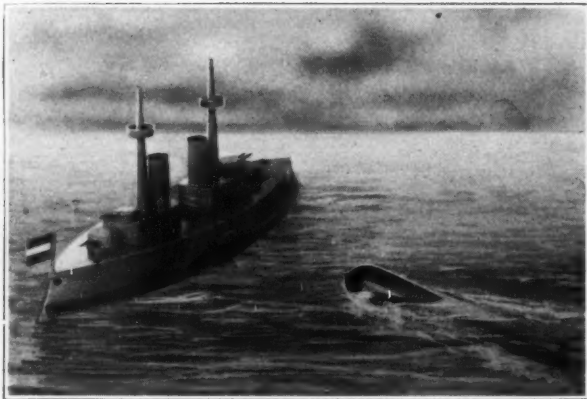
Read This—Write Us

Write today—sending us the names of folks in your neighborhood who are going to build new barns—remodel old ones or put in concrete floors and we'll send you a copy of the "How Book for Contractors" bound in keratol leather and details of our Free Blue Print Service.

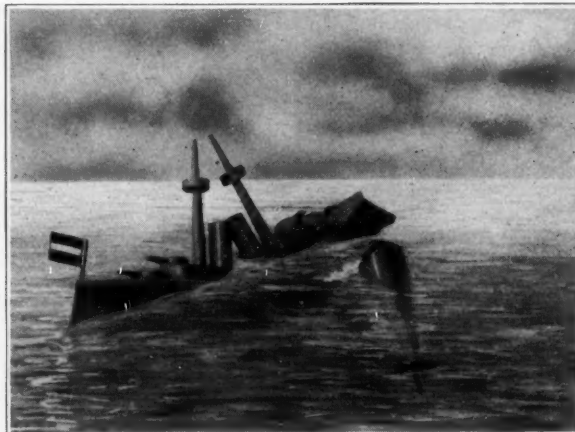
HUNT, HELM, FERRIS & CO.

304 Hunt St.

HARVARD, ILL.



The Torpedo is Advancing on the Warship.



The Warship Sinking to the Bottom.

realized this and set to work to give the woodworkers of the country a better hammer—the Vandor Vanadium.

They were not without the "encouragement" of many kind friends who said that no workman would pay extra money for a *good* hammer, but they believed he would if it was worth it.

Today they know their belief was not misplaced.

As a suggestion, we might mention that a Vandor Vanadium hammer makes a man's Christmas present that is unique and one that is found ready for any kind of job any day of the year.



Ingenious Naval Toy

The peace advocates would probably frown on this battleship and torpedo as a proper companion for growing boys! You can't change boy nature, though; and if at Christmas

time you want to please the youngsters, never mind what the peace teachers say.

Here is one of the best war toys ever produced. Two of our subscribers, a prominent Chicago architect and a tile manufacturer are backing it, so we know it is O. K. Moreover, we have seen it work. The photographs tell the story, and show how the gallant boat is torpedoed and sunk.

The battleship is made of steel, 14 inches long; the torpedo is made of brass and wood, 7½ inches long. The torpedo is self-propelling, and when aimed properly deals the dreadnaught a death blow that sinks her every time.

We understand that before Christmas time this outfit will be on sale at all toy counters. Inquiries concerning it may be addressed to the Walbert Mfg. Co., 178 W. Jackson Blvd., Chicago, Ill.



NATIONAL Plaster Board for Interior Walls and Sheathing under Siding

For Walls and Ceilings

National Plaster Board is an incombustible, fire-resisting lath, composed of plaster, wood fiber and paper. It comes in sheets 32x36 inches and 5/16 to 3/8 inches in thickness. It acts as an insulator, keeping a building warm in winter and cool in summer. It deadens sound and makes a strong, firm wall or ceiling that is non-cracking and free from stains. Plaster applied to National Plaster Board forms a perfect bond. This Plaster Board possesses lightness and great tensile strength.

Use it as Sheathing Under Siding

Look at the Photograph. Notice the large area each sheet covers. You can easily see why National Plaster Board is lower in cost than wood sheathing. It makes a better sheathing, acting as an insulator to both heat, cold and dampness. Don't forget it is Fire-resisting, too. It is easily applied—simply nail Plaster Boards on Studding, the entire building may be covered. Then nail the siding on by driving the nails right through Plaster Board into the studding. A building can be sheathed with Plaster Board in a fraction of the time it takes with lumber. Plaster Board is lower in cost and better than lumber.

We will gladly furnish information and prices about National Brand Plaster Board. Write Today.

The National Plaster Board Co.

Cleveland, Ohio



Even Old Boreas Gives It Up!

Our Roofing Tin proves its true worth when tested by storm. Old Boreas, traveling through space at sixty miles an hour, is prone to sweep every roof in his path unless it is made of

Copper Bearing Open Hearth ROOFING TIN

manufactured exclusively by this Company. Send for booklet "Copper—Its Effect Upon Steel for Roofing Tin." It contains a message of special interest to you.

American Sheet and Tin Plate Company
General Offices: Frick Building, Pittsburgh, Pa.

DISTRICT SALES OFFICES: Chicago Cincinnati Denver Detroit New Orleans New York Philadelphia Pittsburgh St. Louis
Export Representatives: UNITED STATES STEEL PRODUCTS COMPANY, New York City
Pacific Coast Representatives: UNITED STATES STEEL PRODUCTS COMPANY, San Francisco, Los Angeles, Portland, Seattle



Make Money Faster and Easier than You Ever Did

before, by handling W. & C. Metal Shingles. We have a special selling proposition to make to one live man in every town in the country, and its acceptance puts the acceptor in a position to make a great deal of money easily

Walter's and Cooper's Metal Shingles

are proof against fire, wind, storm, snow, rain, lightning, rust and decay; will not curl, check, split, rot, crack, blow or drop off, and are long lasting. Cost no more than wood shingles. Ask for catalog and selling plan.

National Sheet Metal Roofing Co., 339-345 Grand Street, Jersey City, N. J.

J-M TRANSITE ASBESTOS SHINGLES

EMBODY all the merits of other shingles — but none of their defects.



Residence of Mrs. Clara F. Taylor, De Land, Fla.
Roofed with J-M Transite Asbestos Shingles

J-M Transite Asbestos Shingles are far more artistic than wood shingles, as they are made with ragged or smooth edges, $\frac{1}{2}$ and $\frac{3}{4}$ inch thick, in gray, mottled brown, or Indian red. They possess none of the disadvantages of wood shingles, such as inflammability, warping, splitting and rotting.

Are absolutely fireproof and will not split or crack in the presence of great heat as will other similar appearing roof coverings.

Write nearest branch for booklet

H. W. JOHNS-MANVILLE CO.

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THE CANADIAN H. W. JOHNS-MANVILLE CO., Limited
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Indestructible Roofing



GOthic TILE

Cover your buildings with Montross Metal Shingles and save yourself time, money, worry. Economical in price and easily laid. Our booklet, "The Best Roof Under The Sun" will make you a roofing expert. Free on Request.

AGENTS—MAKE MONEY

On our profit sharing inducement to all reliable live wire dealers. Write for information, how our agents are growing rich handling Montross Metal Shingles. Big demand. This is your chance. Don't overlook it. Testimonial letters and affidavits cheerfully given.

MONTROSS METAL ROOFING CO., 102 Erie St., CAMDEN, N. J.



HUDSON ASPHALT SHINGLES

Durable, Beautiful, Low in Cost. Colors: Red and Green

Write for FREE Samples
ASPHALT READY ROOFING CO.
9 Church St., New York, N. Y.



Use the Scientific Shingles On Every Job

The house-owner whose home has a Rex-tile roof will always be grateful to the carpenter and builder who recommended the scientific shingles and laid them.

They are weather and time proof. Nailed at the bottom through a turned-under fold, they can't flap, warp or curl. Rain-water can't seep under the edges.

Rex-tile

TRADE MARK

"The Scientific Shingle"

makes a handsomer roof than wooden shingles, slate or tile, and are more economical.

The color is a part of the shingle—will not fade. No painting necessary. Easy to handle. Light weight and smooth.

Rex-tile is an exclusive material sold at one price. Therefore you are not subjected to price-cutting, because the turn-under fold for nailing—at bottom—no flapping or warping—nails perfectly covered—is patented and exclusive.

Write today for free samples, prices, and full information.

Flintkote Manufacturing Co.

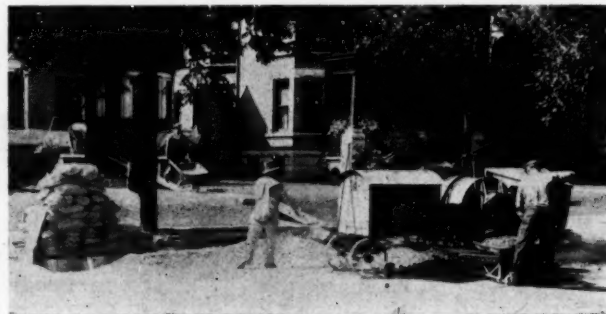
90 Pearl St., Boston, Mass
659 Peoples' Gas Bldg., Chicago, Ill.

Also manufacturers of Paradux—a waterproof canvas covering for all surfaces on which walking will be done—such as sleeping porches, piazza roofs, roof gardens, balcony roofs, boat decks, etc. Easier to lay than tin or metal—far more durable—requires no special preparation of the surface to be covered. Can be painted any color desired.

Atlas Mixer for Sidewalk Work

A handy size concrete mixer, light but strong, mounted on wheel trucks so as to be easily portable, is what is wanted by sidewalk contractors.

This is one of the many uses to which the little "Atlas" mixer is being put. Sidewalk builders report it gives a good account of itself every time. Its low charging feature comes in extra well for sidewalk work where the mixer has to be moved along frequently. One model has a low shoveling hopper and this is very popular with the majority of contractors. This batch hopper is equipped with a slide which separates it from the mixing drum. The hopper can be



Atlas Mixer on Sidewalk Work.

loaded while the contents of the drum is being mixed. As soon as one batch is mixed another slides in on raising the gate. Thus no time is lost and a perfect mixture is assured with all the ingredients added in their proper order and proportion.

Another type of the "Atlas" mixer has a power side loading device. Both the five foot and eleven foot models can be equipped with this side loader.

It is an education in efficient contracting methods for small work to watch a crew of three men and an "Atlas" mixer laying a concrete sidewalk; one man to charge the mixer, one with wheel barrow or wheel cart to move the concrete, and one sidewalk builder and finisher at the forms. Everyone is busy, no waiting; the work marches steadily forward.

Sidewalk work is, of course, only one of the many uses an up-to-date building contractor finds for his "Atlas" mixer. It is in use practically every day doing ten men's work.

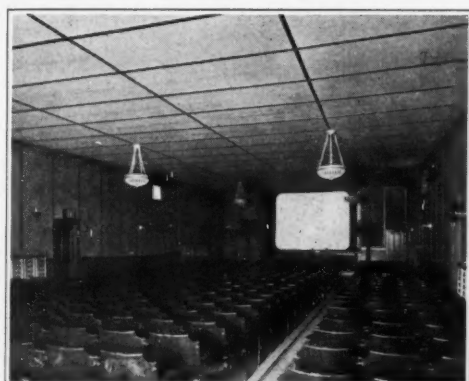
The Atlas Engineering Co., 783 30th St., Milwaukee, Wis., want to send you their very interesting illustrated circulars telling all about "Atlas" mixers and the work that they do. Their claim for their machines covers the four points of quality, dependability, service and economy. It is a fact that some of the largest contractors in the country are using the "Atlas" mixer with complete satisfaction. Small contractors find it a very profitable investment. The Atlas Engineering Company report a very successful year last year, and prospects at this time are so bright they are planning to beat last year's business at least three-fold.

+

New "Wonder Mixer" Book

We have just received a copy of a new book on concrete mixers and concrete mixing that is decidedly different from the common run. It treats the mixer proposition from a new standpoint, that is, it gets at the matter from the point of view of the contractor, telling him what he wants to know in regard to the mixing equipment *and the work it will do for him to advantage*. So many catalogs seem to have been written in the factory or machine shop, filled up with matter of interest only to the manufacturer, and seemingly forgetting entirely the point of view of the man on the outside who should be a possible customer.

This new booklet is being distributed by the Waterloo Cement Machinery Corporation, 103 Vinton St., Waterloo,



Plastergon Solves the "Winter Work Problems"

This moving picture house was built in the winter by Joe. Eisenhaur at a profit of \$115 more than if lath and plaster were used.

PLASTERGON
TREATED
WOOD FIBRE
WALL-BOARD

"Every Panel Guaranteed"

The same success and profit is open to all who use Plastergon because it is the only high quality—all wood fibre—wall-board selling at a reasonable figure.

When Better Board Is Made, We'll Make It.

Take our samples and prices to your customers and you'll get the job.

PLASTERGON WALL BOARD CO.

101 Fillmore Avenue, Tonawanda, N. Y.

High Grade Roofing Slate at Low Grade Prices

Guaranteed to meet the most exacting requirements at lowest minimum of cost is assured the user of

**SHELDON'S
SLATES**

Every known color, trade, size and thickness. Blue prints, lay outs and valuable suggestions furnished covering every detail of your Roof Question. Post a postal and get posted.

F. C. SHELDON SLATE CO. :: Granville, N. Y.



How to Get Lumber at Mill Prices

We ship direct from our Yellow Pine Mills, at Mill Prices to you. We carry in stock over 25 million feet of dry, bright lumber and the capacity of our mills is over 75 million feet annually.

Contractors

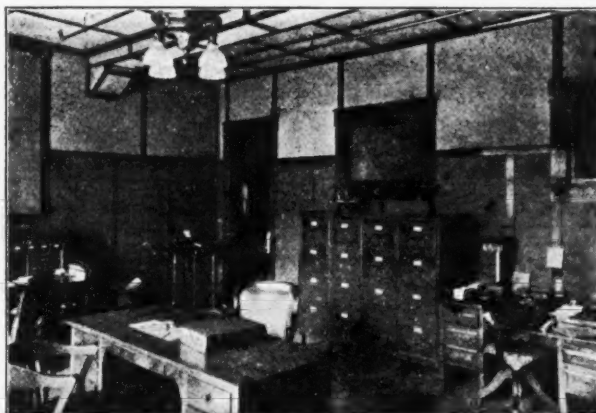
Home Builders

We can furnish promptly, lumber for building of every character. We can cut and dress timber up to 24 x 30 in. 40 feet long. Can ship quickly form lumber for all kinds of concrete structures. Contractors and home builders write us for delivered prices.

Send No Money

We guarantee the quality of our lumber and ship subject to inspection and approval to all responsible parties.

Home Lumber & Supply Co. 343 S. Dearborn St., Chicago, Ill. Dept. 6024



Build For Permanent Profit

When you have a job of interior finishing, whether in an office building, a factory or a private home, don't forget that every dollar you save for your client will be appreciated and that his continued patronage depends on the value you put into the first job. You will please your patron and make a satisfactory profit for yourself when you use

Roberds Ideal Wall Board

Unlike many substitutes for lath and plaster, Roberds Ideal Wall Board is not a make-shift but is a substantial, time-tried and thoroughly practical interior finish that does not shrink or bulge, does not pull off or warp. It goes on in a truly workman-like manner and stays where you put it. Properly applied, it makes the most handsome, durable and permanent form of interior finish. Our proposition to contractors makes this a most profitable line to handle. Write for territory, booklet, samples and prices.

Roberds Manufacturing Company, 100 Railroad St., Marion, Ind.

BEAVER BOARD

Walls & Ceilings

Cut It With a Saw

One of the advantages of BEAVER BOARD over lath and plaster is that it can be put up quickly without any muss or litter.

You cut it with a saw just like any fine lumber.

BEAVER BOARD is easy to put up and our Builders' Service Department makes it easier for you by giving helpful suggestions that cover every phase of construction.

Let us send you a free painted sample of BEAVER BOARD and also put your name on our mailing list to receive all helps furnished by the Builders' Service Department.

The Beaver Board Companies

U. S.: 337 Beaver Rd., Buffalo, N. Y.

Canada: 537 Wall St., Ottawa, Ont.

Gt. Brit.: 4 Southampton Row, London, W. C.



Iowa. It features the "Wonder" line of concrete mixers. It is a profusely illustrated book of 40 pages. It visualizes very satisfactorily the thoroughness of the construction of the machines and explains the "reason why" in a way that will be very gratifying to the investigating contractor "from Missouri." The construction scenes showing the wide range of utility of the Little Wonder "5," and the Wonder "10" are a unique feature of the catalog. A copy will be sent free to anyone interested.



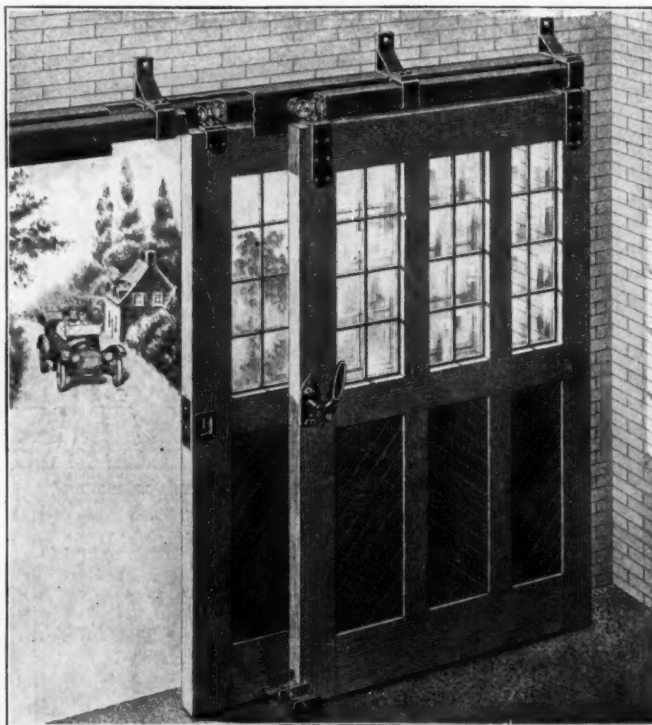
R-W Parallel Door Equipment

The accompanying illustration shows a pair of garage sliding doors hung on R-W parallel door track, stayed at the floor with adjustable door floor guide and equipped with special parallel door bolt.

This is one of the popular forms of modern garage doors as equipped with Richards-Wilcox Manufacturing Company's hardware. The hangers are the R-W ball bearing garage door type. The track as shown comes assembled complete in sections to accommodate different sized openings.

Notice the weatherstrip feature which is a part of this parallel door track. The weatherstrip extends below the top of the door, making this equipment absolutely storm-proof. The double brackets that support the track are bolted through the wall or may be secured with expansion bolts. A space of 12 inches should be allowed between the door lintel and the ceiling to accommodate these double brackets.

The Richards-Wilcox Mfg. Co., Aurora, Ill., have a very complete line of sliding door hardware. Their information de-



Garage Parallel Sliding Doors Viewed from Inside; Track, Hangers, Lock and Guide Furnished by Richards-Wilcox Mfg. Co.

partment is at your service for free help in working out any sliding door problem. Write them also for their illustrated circulars.

INTERNATIONAL Asphalt Shingles Durable—Rich in Color—Economical—Fire-resisting

SEVEN STYLES

Costs Less Than Wood Shingles

Made of the Best materials obtainable by a special process.

Will resist Heat, Cold and are absolutely Water-proof.

Made in standard size, 8"x12 3/4", packed in cartons.

Because of their fire-resisting qualities, they go a long way in lessening fire hazards.

MAGNIFIED SECTION



The Perfect Roof for Cottage or Mansion

A practical roofing material that will make a satisfactory roof for the Mansion—Residence—Bungalow. Wherever you want a real roof that will stand up under all sorts of adverse weather conditions.

Easy to Lay—once laid will not leak, curl or warp. Add Tone and Dignity. Harmonize with the architecture and above all please the owner.

INTERNATIONAL ROOFING MFG. CO.

5305 to 21 So. Western Ave.

CHICAGO, ILL.

Please send me postage paid a full size sample of your shingles.
Send This Coupon Today
Name.....
Street.....
City.....

Johnson's Prepared Wax

is a complete finish for all woodwork, floors and furniture. Apply with a cloth and in five or ten minutes polish with a dry cloth. Gives perfect results over any finish—varnish, shellac or oil. For polishing automobile bodies and bar tops it has no equal.

Johnson's Flat Wood Finish

Gives that artistic, hand rubbed effect at one-third the expense. Requires no rubbing or polishing.

Generous Samples Free

Address
S. C. Johnson
& Son
"The Wood
Finishing
Authorities"
Dept. ACB12
Racine,
Wis.

Johnson's
Prepared Wax
is a lasting
artistic finish
for floors—new
or old—soft
or hard



The Untrained Man

The Trained Man

Your Future Depends On Yourself

A few years hence, then what? Will you still be an untrained, underpaid laborer, or will you be a specialist in your chosen line of work where you can earn more in one day than the untrained man earns in a week?

Your future depends upon yourself. You must decide now. To hesitate, to put it off, or to be undecided means that you must plod the hard road of disappointment, poverty, and failure. To mark and mail the attached coupon is the first step to promotion and success.

The only way to keep out of the dollar-a-day class is to get the special training that will command the attention and a better salary from the man higher up. The International Correspondence Schools have shown to thousands the way to positions of power and increased salaries. They can do the same for you.

Your future is before you. Are you interested enough in it to learn how the I. C. S. can fit you for a real big job? No matter where you live, how little you earn, or what your previous education has been, the I. C. S. have a way of helping you. For over 21 years the I. C. S. have been helping young men to increase their earnings and to rise to positions that insure a better income.

The 400 or more letters that are sent to us every month reporting increased salaries, prove our ability to help you.

Choose a high-salaried future and

Mark and Mail the Coupon NOW

Get \$500 for \$200 and a Quick Turnover

Other builders are doing this every day. They have learned by experience that they can more than double their money and dispose of the houses they build in short order by equipping every one with the

TUEC STATIONARY CLEANER

For Health and Cleanliness

For the average \$3000 house the Tuec Cleaner complete with hose and tools costs only \$160, f.o.b. Canton, Ohio. You can install it for less than forty dollars and get at least \$500 more for the house. Rentals will be increased in even better proportion.



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The United Electric Co.

Write today for particulars and FREE BOOK telling where thousands of TUECS have been installed. Our special proposition will interest you greatly.

The United Electric Co.
30 Hurford St. Canton, Ohio

International Correspondence Schools

Box 910, SCRANTON, PA.

Please explain, without further obligation on my part, how I can qualify for a larger salary and advancement to the position, trade, or profession before which I have marked X.

Architect
Arch'l Draftsman
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Building Inspector
Structural Eng.
Structural Draftsman
Plum. & Heat. Con.
Supt. of Plumbing
Foreman Steam Fit.
Plumbing Inspector
Heat. & Vent. Eng.

Estimating Clerk
Civil Engineer
Surveying
Mining Engineering
Mechanical Eng.
Mechanical Drafts'n
Stationary Eng.
Electrical Engineer
Electric Lighting
Electric Railways
Concrete Const'r'n

Automobile Runn'g
Foreman Machinist
Sh.-Met. Pat. Drafts.
Textile Manufact'g
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Stenographer
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St. and No. _____

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When You Want — Tiles and Mosaics

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For
Bath Rooms,
Kitchens,
Hallways,
Drug Stores,
Ice Cream Parlors,
Banks,
Buffets,
Walls,
Wainscoting,
Store Entrances.

Artistic
Designs
and
Superior
Quality

We carry a most complete line of Ceramic Mosaic Floor Tile and Sanitary Glazed Wall Tile for every purpose. Our designs are unusually artistic and correctly executed. The quality is **Lorenzen**—the best guarantee a builder can get. You can depend upon our prices being right.

Let us estimate on your next job or furnish you with an original design. At any rate, write for our Catalog No. 51 on Tiles and Mosaics. A postal will bring it and it is invaluable for your files.

Our large booklet, "Vogue in Fire Places" the most comprehensive and complete catalog ever issued on Fire Places should also be in your files. Write for it.

Send for our Discount Proposition to
Carpenters and Builders

Chas. F. Lorenzen & Co.
103 Washington St. CHICAGO

A Carpenter's "Right-Hand" Material

You always want your "right-hand" man on the job. To have the correct material handy for every job is often just as important.

The test of 15 years' time has proved



Trade Mark Registered U. S. Patent Office, No. 94745

very useful in a multitude of ways. Beside its principal use as a wall board, nothing better can be found for

- lining garages and outdoor sheds for warmth.
- lining summer cottages (it will help keep them cool).
- quick repair partitions in any kind of building.
- enclosing rooms in attic or cellar.
- building dust-proof closets and cabinets.
- panels in wainscoting or beamed ceiling.
- drawer bottoms, case and cabinet backs, shelves.
- in fact, you'll run into a job nearly every day that Compo-Board will help you do better and quicker.

Sold by dealers almost everywhere, in strips 4 feet wide and up to 18 feet long. Write us for free sample and booklet—we'll tell you who handles it in your town.

Northwestern Compo-Board Company
5777 Lyndale Ave. No.
MINNEAPOLIS, MINN.

Silkworms and Tools

Silkworms and tools have this in common: their usefulness produces results out of all proportions to their size and cost. Who would attribute the origin of handsome silk gowns to tiny animals? And who, admiring a handsome building, gives a thought to the humble tools without which the structure could not have been built? The joy a silk dress brings to a woman is no greater than the delight a good tool means to a good mechanic. This accounts for the popularity of "Red Devil" tools (bits, chisels, mitre boxes, pliers, glass cutters, etc.) the world over.

"Red Devil" tools are in a class by themselves—made by mechanics for mechanics, made to do the work well, not merely made to sell.

This is why the custom is growing to give them as Christmas presents to friends and employes.

This shows common sense in gift-giving, because—unlike things seldom used—"Red Devil" tools remind the recipient of the giver every weekday and thus are a very active, highly appreciated memento of good will and friendship that lasts from one Christmas to the other.

There is quite a variety of "Red Devil" tools, glass cutters and other glaziers' tools; bits, chisels, nail pullers, pliers, etc., etc.

They can be obtained from your dealer, or from Smith & Hemenway Company, Inc., 150 Chambers Street, New York City, to whom write anyhow for booklet.



A Popular Galesburg Cupola

The accompanying illustration is of a heavy galvanized steel cupola ventilator suitable for large barns. It is manufactured by the Galesburg Sheet Metal Works, Galesburg, Ill., and is being shipped all over the country to contractors and barn builders.

This is their No. 9 cupola. It comes in three sizes, as follows: 4 by 4 by 8 feet, 5 by 5 by 8½ feet, and 6 by 6 by 9 feet. It is built to resist the wind, is screened on the inside to keep the birds out, and is handsome in appearance. The weight is only a trifle as compared with a wooden cupola of the same sizes. This takes the heavy load off the roof timbers. The cost is also said to be 50 per cent less than for a wooden cupola.

The Galesburg Sheet Metal Works are winning an enviable reputation for high quality and moderate prices. Their line includes practically everything in sheet metal goods.



Sheet Metal Barn Cupola.

IVES PATENT WINDOW STOP ADJUSTER

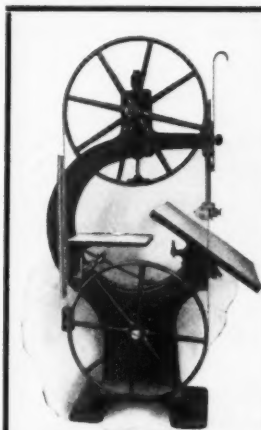
Prevents Drafts, Dust and Window Rattling



The only stop adjuster made from one piece of metal with solid ribs and heavy bed that will not cup or turn in tightening the screw
Descriptive circular mailed on application

THE H. B. IVES CO.

Manufacturers of Builders' Hardware
NEW HAVEN :--: :--: CONN., U. S. A.



27 inch Band Saw \$58.50
12 inch Jointer . 80.00
Both Machines for \$135.00

F. O. B. Kansas City



Write for our complete Money Saving Catalog and Prices.

Standard Machine Tool and Supply Co.
1st and Main Sts., Kansas City, Mo.



SLATE

"The Standard"

Of late years there has sprung up all kinds of roofing materials. Bear in mind they all have to go through a manufacturing process. Most of them contain more or less inflammable material (felt). Some are surfaced with slate (By the way—Why do they surface with Slate?). But here's what we want to impress on you, Mr. Builder. Why not use Nature's Rock, hard material that is solid and uniform all the way through, that is absolutely fireproof all the way through? Why use an inferior roofing when Slate is really cheaper?

Slate lasts forever and always retains its soft, rich coloring. Why not roof your buildings with slate? We'll furnish you estimates and Free Samples so that you can make comparison. Get in touch with us Today.

BANGOR SLATE MINING CO.
Trust Bldg. - Bangor, Penna.

WAGNER DOOR HANGERS

are furnished in styles, sizes and weights to meet every requirement of modern building. While there are more than a score of distinct models all have certain Wagner features that make them pre-eminently the best Door Hangers on the market. For instance:

Wagner Ever-Tight Trolley Track

—a specially designed new track that meets a long felt want. Fits up absolutely tight to building and lower part protects hangers and top of door. Impossible for rain or snow to drive in. Self-cleaning the same as all Wagner Tracks. Absolutely bird-proof. Impossible for door to come off.

High grade roller bearing wheels Improved tandem trolley with bumper on end which prevents damage to trolley wheels.

Patented cam and lateral adjustments that insure easy and accurate adjustment.

Other important features of Wagner Trolleys and Tracks are illustrated and described in our new circular which we will gladly send you, free. Write for a copy today.

Ask Your Dealer

for Wagner Door Hangers and Tracks. If your dealer isn't inclined to supply you with Wagner goods, we'll fill your order direct.

Wagner Mfg. Co.
Dept. F
Cedar Falls,
Iowa

This Illustration

shows a full-size cross section of Wagner Ever-Tight Track. All Wagner tracks are made of high carbon steel. Insures longer life and better service.

The Most Important Thing About Your Business

is that every customer should send you new customers. He will, if thoroughly satisfied.

The most important thing to keep him permanently satisfied, is to give him a permanent building.

This, of course, requires a permanent roof, such as

Genuine Bangor Slate

It has helped many builders build up a permanent and profitable business. We have a special plan that helps them do it.



Do you wish more particulars? They are free. You will probably find it profitable to send the appended coupon today.

Genuine Bangor Slate Co.
Easton, Pa.

Genuine Bangor Slate Co.,
Easton, Pa.

December, 1914

Please send information.

Signed.....
Address.....
City.....State.....

A True Story—Shipping Steel to Sheffield

A very interesting story is told by the L. & I. J. White Company of Buffalo in regard to the standing their tools have in England.

Sheffield, England, as we all know, is considered the very center of the high-class tool trade. It is known, almost, by the quality of the tools that are made there.

At a recent convention held in Buffalo, one of the visitors took the pains to come down to the offices of the White Company, and said: "Gentlemen, I am from Massachusetts and I want to tell you a true incident about the White edge tools. A few months ago I had a friend going back to England on a visit, and as I am a carpenter who likes to have the very best tools to work with, I asked him, when he visited Sheffield, to purchase for me the very best set of chisels that he was able to buy—price was immaterial. I asked him to go around and talk to the carpenters and see which ones they preferred and to get the best. My friend was over there nearly two months and when he returned he gave me a bundle and presented me with a bill that was a pretty stiff one, but as I had told him to get the best, I didn't complain. He said, 'that set of chisels is the one that nearly every first-class carpenter over there told me was the *very* best, so I know I didn't make any mistake.' On undoing the bundle, whose chisels do you suppose they were? Yep, the L. & I. J. White Company's chisels, made in Buffalo, N. Y."

The White Company have never used this story for advertising, for to many it would sound—well, call it over-drawn—but the absolute truthfulness of the story is vouched for, both by the carpenter and the White Company.

In one way, it is not entirely surprising, for the White Company have been making tools since 1837, seventy-seven

years, and have never made tools to sell on a price basis. They get more for their goods because they are really worth more, and getting more they are able to strive constantly for quality.

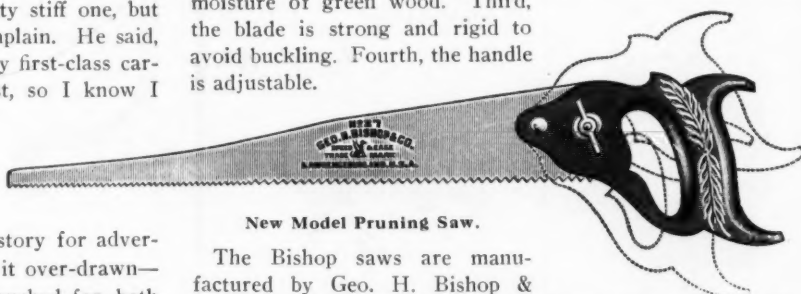
On account of the high price, every hardware store does not carry these tools, but whenever a carpenter is unable to get them from his dealer, the White Company will see that he is supplied direct.



New Style Pruning Saw

The latest creation of Geo. H. Bishop & Co. is the No. 27 pruning saw, illustrated herewith. The improvements embodied in this design have been suggested by operators, and it is thought that this saw will meet a long-felt want.

The points of advantage are as follows: First, the slim point permits the tool to enter between close branches. Second, the graduated teeth assure easy, smooth cutting, and eliminate friction and binding in the cut occasioned by the moisture of green wood. Third, the blade is strong and rigid to avoid buckling. Fourth, the handle is adjustable.



New Model Pruning Saw.

The Bishop saws are manufactured by Geo. H. Bishop & Co., Lawrenceburg, Ind. The line is very large. Their policy has been to produce a special saw for every special purpose, as that means a saving to the saw user of labor and also better work. The company will mail their new catalog on request.



Are You Going to Get the New Motion Picture Theatre in Your City?

New homes for the "movies" are going up by the thousands. Millions of dollars are being invested. Don't let this profitable business get past *you*.



will enable you to handle all of the difficult structural problems involved in this class of work, easily and profitably. Its flexibility enables you to take care of the most complicated friezes and ornamental work. Its unique construction assures you of a foundation that will endure forever. The plaster is firmly keyed to the wall, all waste of plaster is eliminated, while your workmen will tell you that the trowel work goes more easily and rapidly than ever before.

There are some interesting features of Kno-Burn which you should know at once. We can put you in a position to make every stucco job a profitable proposition and a permanent success. Our booklet No. 33 tells the whole story. A postal brings it. Send today.

North Western Expanded Metal Company, 903 Old Colony Building, Chicago, Ill.



Stanley Ornamental Surface Butts No. 165

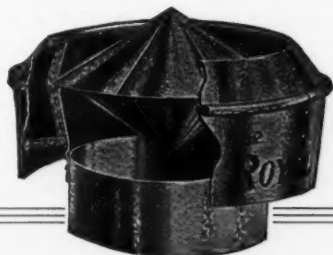
*Save Time and Labor
and Please the
Owner*

The Ornamental leaf screws on the surface of the door, saving half the time of mortising. The slotted ball tip can be unscrewed and the pin reversed so that the butt can be used on either right or left hand doors. Packed with **Oval Head Screws** which fit into the countersink and hold the door firmly. Round head screws will not hold the doors securely in place and if not screwed in straight will cause trouble. The screw head is liable to break or the head will meet the butt on an angle so that it is impossible to draw the butt tight to the door. This makes an unsightly appearance.

The handsome, dignified, **Beveled Edge** design harmonizes with the popular designs of hardware. Made in all finishes.

Write for Booklet "A" describing this and many other lines of "Stanley" Quality Hardware.

The Stanley Works
New Britain, Conn.



The Duty of a VENTILATOR

is to keep the air in a building sweet and pure. Good air is essential to the good health of both human beings and animals.

ROYAL VENTILATORS

ventilate most efficiently. The prices are right, too. We are Ventilator specialists. Our Ventilators are used the world over. WHY? Because Builders and Architects know that Royal Ventilators positively ventilate and are made of best materials, combined with good workmanship. Royal Ventilators are durable and will give the maximum amount of service.

We make Ventilators in all styles. A Ventilator for every type of building and for every Ventilating Problem. Let us place our complete line before you by sending you our catalogue.

Royal Ventilator Company
417 Locust St., Philadelphia, Pa.



No. K3523
\$1.50
Pocket Knife
3 blades.

For Someone You Want to Remember

with a real gift, and a gift of quality, you can depend on this well made, deep-cutting, edge-keeping knife. Anyone will appreciate this

KEEN KUTTER

pocket knife—and any man will be *sure* to like a Keen Kutter Junior Safety Razor set. Remember, all Keen Kutter goods are sold with the understanding that the dealer is authorized to refund the money for any unsatisfactory piece.

*"The Recollection of Quality Remains
Long After the Price is Forgotten."*

Trade Mark Registered. —E. C. SIMMONS.

If not at your dealer's, write us.

Simmons Hardware Co.

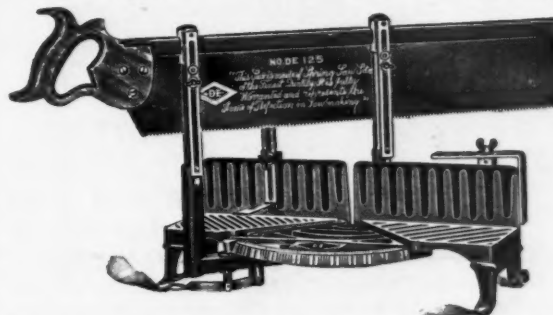
St. Louis New York Philadelphia Toledo
Minneapolis Sioux City Wichita



No. KJ107. Price \$2.50.
Keen Kutter Set:
1 Keen Kutter Junior Safety
Razor.
1 extra package of blades.
1 Keen Kutter automatic
strop.
All in green karatol, plush-
lined case.



'DIAMOND EDGE Tools A Recognized Standard of Quality



DIAMOND EDGE Mitre Boxes have more new practical ideas than shown in any other. Their simplicity of construction and quick adjustment appeal to the mechanic.

The notched segment and locking device is the most important improvement made in mitre boxes in recent years.

Entire frame oxidized copper finish. Clamps and trimmings heavily nickel plated. All castings made of the best quality tough gray iron.

The celebrated **DIAMOND EDGE** Saws furnished with these boxes. Every one is accurately adjusted to the particular box which it accompanies.

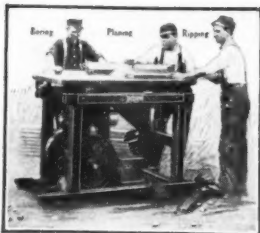
Ask your hardware dealer. He can supply you. If not write us. **Department W.**

SHAPLEIGH HARDWARE CO.

Established 1843

ST. LOUIS

"DIAMOND EDGE IS A QUALITY PLEDGE"



Does Three Things

If you knew how accurately—how economically—a Novo Saw Rig No. 4 would do your

Boring, Planing and Ripping you would have one on your pay roll tomorrow.

They cut labor cost surprisingly. One fair sized job pays its entire cost.

NOVO ENGINE CO. 444 Willow St., Lansing, Mich.
CLARENCE E. BEMENT, Secretary and Manager

For Service

For Price

GENUINE FRANKLIN TUNNEL ROOFING SLATE

During its life, you will probably roof a building four or five times. The expense is great. Use G. F. T. Slate and only one roof is necessary. The cost? Practically the same as any good shingle. Cleaner and more artistic, too; also fire-proof.

Send for the **FREE BOOK** that gives real facts about G. F. T. Roofing Slate. Samples and Prices, too.


SLATINGTON SLATE CO. Slatington, Pa.




Start a Sealing Vault Business Along with Your Regular Work

A Real Money-Making Side Line for Builders Manufacture THE AUTOMATIC SEALING VAULT

Here's something that will net you a nice little income during the winter months and the whole year around. No costly equipment or building needed, your little shop will do and a set of Automatic Sealing Vault Molds. No experience is necessary and only a very small investment—so small that a few Vaults will soon pay for it. The average profit on each Vault made is from \$15.00 to \$24.00, and the manufacturing cost is only \$6.00.

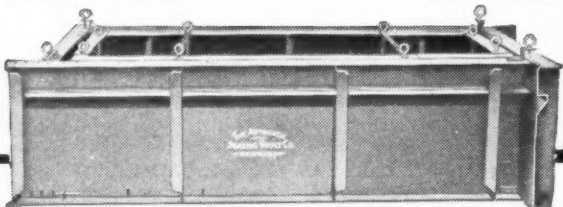
These Vaults are beautiful in design and are absolutely water-tight, moisture-proof, and will last forever, growing stronger with age. They are called the Automatic Sealing Vault because of their Automatic Seal, when the cover is on it is impossible for water or moisture to enter because of the air pressure on the inside.

Why not be the first one in your locality to make the Automatic Sealing Vault, there is a sure and steady demand the year around and you will be surprised how nicely this can work in with your regular business. Let us send you more information and details. They will interest you and show you the great possibilities.

Automatic Sealing Vault Co.

36 E. River Street

Peru, Indiana



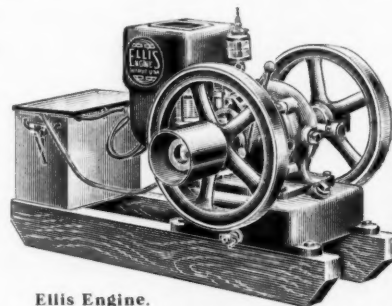
WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN CARPENTER AND BUILDER

Engine Facts for Contractors

The point is well made by the Ellis Engine Company that every contractor and builder who does not use a reliable engine is paying for an engine without getting it. He pays for it in lost time and in labor costs. When you consider that you can buy an Ellis out of two weeks wages to one workman you begin to see what this means. They say, "Don't pay for your Ellis without getting it."

The Ellis engine seems to be especially well suited to the needs of contractors and builders. It is a very compact design and light in weight in proportion to the power. This makes it a good engine for portable work. Moreover, it can be reversed while running.

The strong point for economy is made of the fact that the Ellis Engine uses kerosene.



Ellis Engine.

The automobile demand has sent gasoline prices kiting, the while Mr. Carpenter operating a kerosene engine is congratulating himself. Kerosene has not gone up.

Before investing in an engine a man should study all the pros and cons of the proposition, carefully comparing the strong points of the leading models. More important still is to look into the record of actual performances out on the job. The contractor wants an engine that is trouble-proof and will do the work under all conditions. The 48-page illustrated catalog issued by the Ellis Engine Company will prove very interesting and satisfactory to the careful buyer. Every possible question seems to be fully answered. One page that is especially telling is entitled *What and Where*. "What have they done and where have they done it" are very proper questions to ask regarding Ellis Engines. The following list is given showing some of the jobs on which Ellis Engines are giving good account of themselves:

They are Used for

Pumps of all kinds	Contractor's saws	Ice cutters
Ice making plants	Fodder cutters	Churns
Cream separators	Grain grinders	Washers
Milking machines	Corn shellers	Blowers
Railroad handcars	Lumber saws	Tractors
Stern wheel boats	Cement mixers	Elevators
Mining machinery	Thrashers	Hoists
Sugar cane mills	Silo fillers	Forges
Cotton pickers	Choppers	Laundries
Printing presses	Shredders	Cider mills
Machine shops	Huskers	Cotton gins
Electric generators	Wood saws	Hay balers

The other list showing where they are used gives every State in the Union and Province in Canada, every South American country, and a number of European and Asiatic countries.

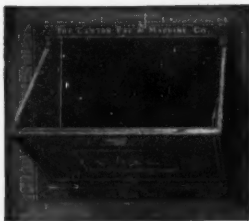
We advise our readers to write today to the Ellis Engine Company, 2863 E. Grand Blvd., Detroit, Mich., for a copy of this catalog. It is entitled "Engine Facts."



Willis Sheet Metal Goods

The demand for efficient barn ventilators of sheet metal and for skylights is increasing daily. Farmers realize that fresh air in their barns and stables means healthy live stock and profits. The old time heavy wooden barn cupolas never ventilated very much. All that could be said for them was that they finished off the top of a barn and made it look nice. Now the sheet metal cupola ventilators look just as well, and even better, architecturally. They are efficient ventilators, last a long time without becoming dilapidated, and mean quite a saving in cost to the builder.

BURGLAR-PROOF



CANTON Coal Chutes

are absolutely burglar-proof. Just like a part of the solid wall. Some coal chutes are flimsy and are easily jimmed or forced open. If you want a good substantial Coal-chute; that is impossible to force on account of its construction, specify and install Canton Coal Chutes.



Modern Buildings

All modern buildings have Coal-chutes. They save their cost by eliminating all inconveniences and marring of buildings. The Canton is so constructed that it can be opened from the inside or outside saving many steps. The Canton is neat, makes a good appearance in any wall.

Our Booklet B-1 shows our Complete line of Builders Iron Work. It will save you money on many jobs. Write today for it. It's FREE.

Canton Foundry & Machine Co.
Canton - OHIO



The Window Chute



Ready for the Coal Man

For Your Coal Bin

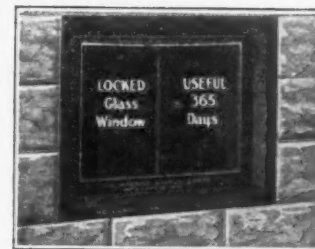
The Window Chute is a selling feature for any Residence or Building.

**THOUSANDS IN USE---
THE VERY BEST**

If You Build, Buy, Own

Be up to date and
Have the Worlds
Best

Write for
Booklet C



A Light Basement

HOLLAND FURNACE CO. :: Holland, Mich.

World's Largest Direct Installers of Furnaces.

WATERLOO CAST IRON Coal Chutes



Protect the house from careless coal men. They are burglar proof—lock only from the inside.

Being made of cast iron, are not affected by the weather.

Wire glass in door furnishes light to cellar. When door is open, the glass is protected by heavy steel, which operates automatically.

The watertable at the top of chute protects the inside of foundation from moisture. Doors are extra heavy, with three hinges at top, and are made with a beaded edge which extends over the border opening, making a tight joint. Are made to fit any depth wall.

Send for catalog, which quotes special prices to contractors.

The Waterloo Register Co.

114 Rath Street

Waterloo, Iowa

Peerless Corner Miters



save their cost in labor many times over where weather boards are mitered. They are made of galvanized iron and the small points at the bottom serve to hold the corner firm and prevents the miter from pulling away. There are no nails exposed when using the **Peerless** miter.

Free samples and prices on request.

Indianapolis Corrugating Co.
Indianapolis, Indiana

"OTTOMATIC" COAL CHUTE

Fireproof Burglar-Proof
Fool-Proof

Only One Operation Required

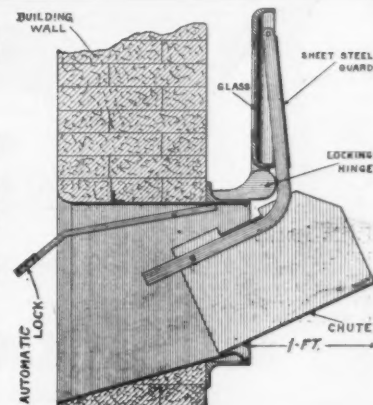
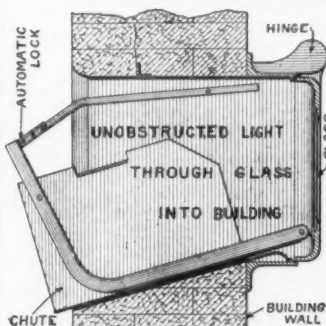
One operation opens the window, places a guard over the glass, and pulls the Chute out more than a foot. It will prevent marring your building, it will prevent coal falling on the ground, and can be placed in the wall before or after the building is completed.

The "OTTOMATIC" Coal Chute comes in two sizes. Size No. 1 measuring outside of the frame 17x24 inches. Size No. 2 measuring 22x33 inches outside the frame.

Write for Complete Description and Prices.

THE MAXIMILIAN COMPANY

844 Monadnock Block, Chicago



The Willis Manufacturing Company, Galesburg, Ill., are putting out a very extensive line of architectural sheet metal goods, making quite a specialty of barn ventilating cupolas. In a comparatively few years they have built up a big business. Their goods are now shipped into every State in the Union. This progress has been due to honest workmanship and fair dealing with contractors and builders.

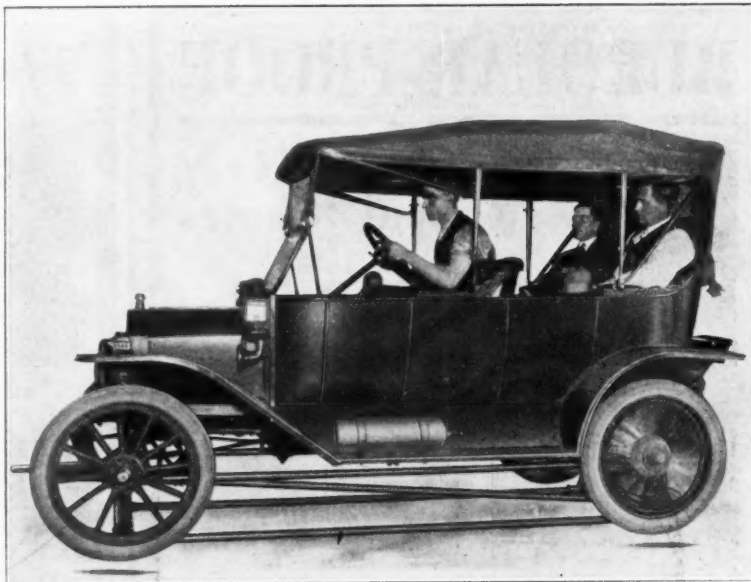
The skylight is also a big feature with Willis. Willis skylights are manufactured in all the approved styles through a full range of sizes. Willis skylights are guaranteed to be water-tight.

We suggest that all builders make sure that they have at hand a copy of the Willis catalog of builders' sheet metal specialties. If you are not yet acquainted with this line or have loaned out or mislaid your Willis Catalog, write the Willis Manufacturing Company today, addressing them at Galesburg, Ill.



Give the Tires a Rest

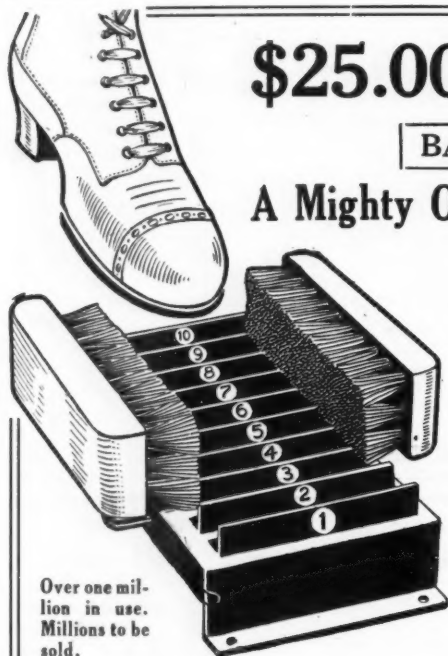
A very ingenious automobile jack that car owners want the minute they see it is being marketed by the Monarch Automatic Auto Jack Company, First and Main Streets, Kansas City, Mo. They are being distributed through local agents, and we understand there is a good deal of desirable territory still open. The accompanying illustrations show what this automatic auto jack is, and how it is used. Automobile tires wear 50 per cent longer if they don't have to work all the time, but can get a "good night's



Auto Jack and How it is Used to Save Tires.

rest" whenever the car is in the garage.

This looks like a good agency opportunity for our readers. Write the company today for particulars.



\$25.00 Paid for One Day's Work

BANKER'S PAY FOR AGENT'S SERVICE

A Mighty Opportunity for You to Get the Mighty Dollar

New business. Tremendous sales. Means \$3,000.00 this year for you. Mighty labor-saving invention.

MILLION ALREADY SOLD, YET JUST INTRODUCED!

Entire country waiting to buy. Agents amazed at quick, snappy sales. All records broken. Here's just a few: Walters made \$25.00 first day; never sold goods before. Arnold, North Dakota carpenter, orders one, then two gross; sold 160 in 2 days (profit \$80.00). Hagen, Texas, sold 100 in two days. Webb, Pennsylvania contractor, averaged 10 sales per hour. O'Connell, Montana, 25 first day. Mike Bock, Minnesota, writes: "They are fine sellers; worked one day and sold 30 (profit \$15.00)." Harry Gassmann, Illinois: "Can sell scrapers as fast as I can get them. Overwhelmed with orders. Everybody wants scrapers; 100 already sold." Roy Burningham, Massachusetts: "Send 10 dozen. One week's work." M. H. Dodge, Kansas: "Send 5 dozen. Sold 24 in two hours." (Profit \$6.00 an hour.)

Let us refer you to hundreds like these. The article, not men, responsible for these unusual results. You can do as well. Previous experience unnecessary.

GRABS' SCIENTIFIC AUTOMATIC FOOT SCRAPER

Sells itself. You take orders—that's all. Every family wants one on their doorstep. Automatically removes mud, dirt, snow from shoe in one operation. Cleans sole, sides, heel. Works like magic. Saves drudgery, time, money, shoes—saves carpets, floors. Has 7 new patented features not found in any other scraper—10 steel blades—10 dirt outlets—twin adjustable and removable brushes—compound springs. Rotates for sweeping. Can't clog—practically self-cleaning. Handsomely enameled. Price low—only \$1.00. Agent's profit 100 per cent. Satisfaction guaranteed. Write quick for free catalog—exclusive agency—overwhelming proof. Better still, send order, naming territory. Investigate anyhow. A postal will do.

SECURITY MANUFACTURING CO.

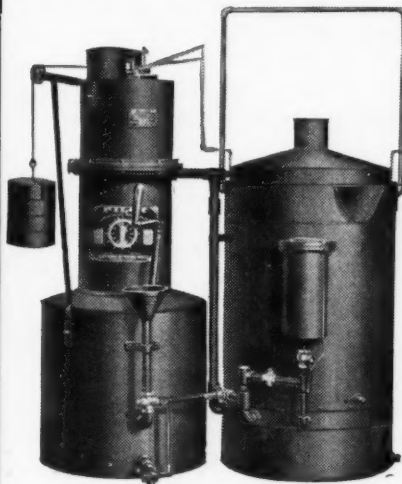
Dept. 17

TOLEDO, O.

Winter Profits for You

There are hundreds of home owners right here in your vicinity that want an Acetylene Lighting Plant and are waiting for YOU to sell it to them. Your work is slack during winter months. You can easily sell

PILOT GENERATORS



The Pilot

World's standard of merit in Acetylene Generator construction. Adaptable for church, school or home. More than 250,000 country homes are enjoying city lighting and cooking service, furnished the PILOT way. Make the winter season profitable—Keep the dollars rolling in.

Write us today for our proposition and we will show you how

OXWELD ACETYLENE COMPANY
Jasper Place Chicago, Illinois

Get a Lighting Profit

Aren't you overlooking a bet? When you build a farm or village home there is no reason why you shouldn't get an extra profit that usually goes to an outsider.

SELL DAVIS SYSTEMS We Help You

Even send a salesman to help you close the hardest prospects when you wish.

The Davis Acetylene Generator is known from Coast to Coast—in Washington—in Florida.

**Big Profits for you—and we help you sell.
Get Proposition—it will please you.**

DAVIS ACETYLENE COMPANY
90 Crawford St. ELKHART, IND.

C. K. Sober's Automatic Acetylene Generator

Safe, Simple, Economical, Clean, Self-Acting

Cut shows Sober's generator, complete with retorts, etc., ready to be recharged. Carbide is placed in the retorts, so that residue is easily carried out. No dirty pits to clean.

This generator occupies very little floor space. Contains less number of parts than any other generator.

Requires very little attention. Residue, not being transferred at all, cannot spill or blow about. All gas generated is thoroughly washed, removing all impurities. Absolutely safe; endorsed by underwriters. Write for Booklet. Agents Wanted. Special terms to builders.

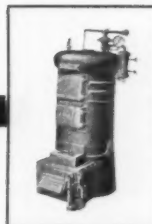
C. K. SOBER
LEWISBURG, PA.



New-Feed Underfeed Furnace



New-Feed Underfeed Boiler



Cutting the High Cost of Heating

Is a simple proposition—if you heat by the Underfeed method. In thousands of buildings—large and small—Williamson Improved New-Feed Underfeed Furnaces and Boilers are saving $\frac{1}{2}$ to $\frac{3}{4}$ of coal bills, besides giving more and cleaner heat with less trouble than any other heating system in existence. Over 30,000 Underfeed users have proved these claims.

WILLIAMSON
NEW-FEED
UNDERFEED
Furnaces and Boilers

Cut Coal Bills $\frac{1}{2}$ to $\frac{3}{4}$

With the Underfeed coal is fed from below. All the fire is on top, causing perfect combustion. Smoke and gases are burned up, making more heat with no smoke, smell, clinkers and very little ashes. You can use cheap slack soft coal or pea and buckwheat hard coal and secure same heat as highest priced coal. Adapted to warm air, steam and hot-water systems.

**50 Per Cent Saving
Guaranteed**

We guarantee a saving of 50 per cent in coal bills with a properly installed and operated Underfeed. Let us tell you more about this. The coupon brings all the information—use it now.

MAIL THIS TODAY—NOW!

THE WILLIAMSON HEATER CO.
(Formerly The Peck-Williamson Co.)
513 W. Fifth St., Cincinnati, Ohio

I would like to know how to cut my coal bills from one-half to two-thirds with an Underfeed.

Warm Air... Steam or Hot Water....
(Mark an X after system interested in)

Name.....

Address.....

My Dealer's Name is..... (51)



Courtney Scaffold Brackets Are Safe

They carry a ton—Last a Lifetime—They save enough on tire jobs to pay for themselves—Easily and quickly put up and taken down by one man.

Our crosshead keeps the scaffold from swinging—no extra charge for this feature.

\$13.50 per dozen for three foot brackets—if cash comes with order.

To Save Money, Order While This Advertisement is in Your Mind.

American Steel Scaffold Co., Dept. 5, Detroit, Mich.

Carpenters and Builders Can Make Money

acting as our local representative. We will pay you a big commission on every acetylene generator ordered through you. Hundreds of homes in your locality should have private lighting plants. Scores will install acetylene gas plants soon. You can "cash in" on every installation and clean up a substantial income yearly, if you get in touch with us right now. Write for full details and proposition at once.

THE GEM CITY ACETYLENE GENERATOR CO
Dept. G. DAYTON, OHIO

Manufacturers of Faultless Pit Generators.



Sanitation on the Job

The Hygienic Promotion Company, Inc., 279 John R. Street, Detroit, Mich., are featuring their "Hypeo Aseptic" closets as the best portable closet for contractors and builders.

It is low in price, sanitary, durable, easy transported from place to place.

Beats the usual filthy hole-in-the-ground-with-a-fence-around-it-and-a-rail-to-sit-on-privy in which the user is exposed to all sorts of conditions of weather.

Equally adapted for use in the modern home where sewerage is not available.

The company can use some more good agents.



Take a Lesson from the War

"The wonderful work of motor trucks in the European war is an object lesson in efficiency that is bound to impress itself upon American business men," says Secretary and Treasurer W. L. Kissel, of the Kissel Motor Car Company.

"It is plain that the war could not possibly have been pursued on such a scale but for the quick method of transporting men, provisions and supplies through the use of trucks. Just as great an economy of time and effort is, as a matter of fact, being saved by KisselKar trucks, and other good trucks, in many lines of business, but it is not brought home quite so strikingly."

"Extra Profits" in Handling Slate

We have received a very interesting letter from J. K. Hower, manufacturer and shipper of hard, black roofing slate and other slate products, of Slatington, Pa. and Danielsville, Pa. It is along the line of our efforts to secure extra profits for our readers. We are glad to reproduce the letter herewith.

Danielsville, Pa., Oct. 22, 1914.

AMERICAN CARPENTER AND BUILDER,
Chicago, Ill.

Gentlemen:—Replying to your favor of the 10th inst. in reference to "Extra Profits" we are pleased to have the opportunity to write, through the columns of your paper, to the many carpenters and builders, who are readers of your valuable paper.

Right here may say that we are Charter Member Advertisers, having been with you continuously since the third issue of the AMERICAN CARPENTER AND BUILDER.

We believe that we can help the Carpenters and Builders to make some extra profits, if they are hustlers and keep moving. Now is the time to get busy selling roofing slate, slate blackboards, structural and plumbing slate. How much a man can earn at this is impossible to say, as so much depends on the man and the locality, but can say that we pay liberal commissions. We have room for fifty or more such men to sell our goods. We do not advance commissions, but

each man will be given an agreement so he knows what he is to abide by, and knows how his pay for commissions comes.

We have several men in the Middle West who sell only during their spare time, still they earn nice commissions; in other words, it is turning what would otherwise be idle time, into money.

One man, during inclement weather, visits the schools in his county, makes a mental survey of the blackboard space and from the teacher gets an idea of how much more blackboard surface is needed—then goes before the School Board and generally comes away with an order for more Slate Black Boards,—which he also generally contracts to set after they arrive at the station. This is just mentioned to show how some men can see a way to turn their idle time to a good paying busy time.

The carpenter who sees a poor roof on a building can land the order for the roofing slate if he describes the quality truly and carefully; then he can also turn the work of laying them his way, thus earning a commission and securing work at the same time.

Will be glad to answer any inquiries from people who are actually interested in the above.

Yours respectfully,

J. K. HOWER,

Danielsville, Pa.

Or R. J. Kichline, Sales Agent, Slatington, Pa.



McCray Has New Chicago Salesrooms

Its rapidly increasing business has made it necessary for the McCray Refrigerator Co. to enlarge its display rooms in Chicago. The new salesrooms at 1000 Michigan Boulevard contain one of the largest exhibits of high-grade refrigerators.

If You Know the Real Quality of My Engines As Well As You Know the Price You'd Buy One Sure!



Because, horse power for horse power, the price of a WITTE is considerably less than that of any other strictly high grade gas engine. But there are other considerations besides price which should have influence in an engine-purchase—its fit to your particular needs—the cost of operating—the ease of starting and running it—its strength and durability—these are a few of the things you want to be sure about when you buy an engine.

WITTE ENGINES

Kerosene, Distillate, Gasoline & Gas

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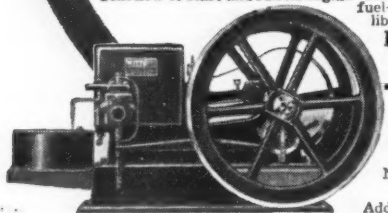
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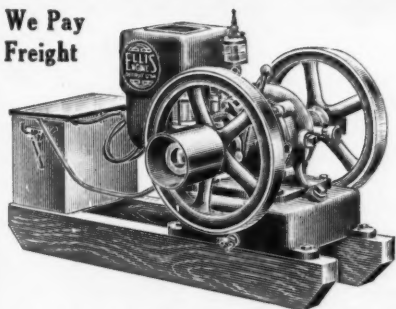
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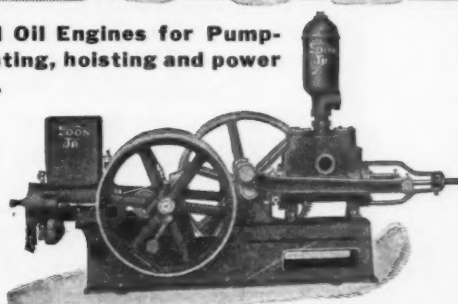
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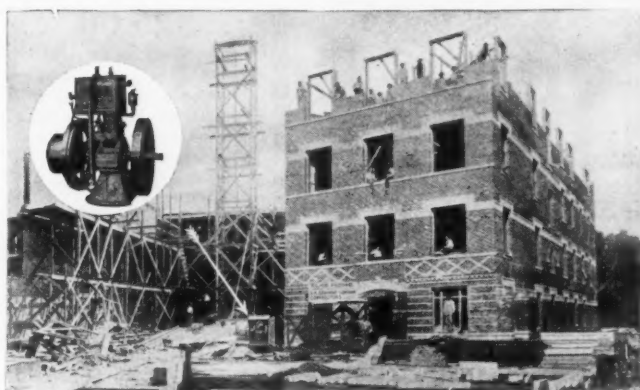
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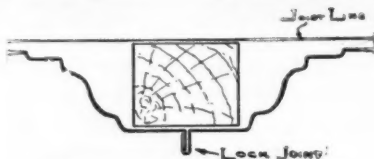
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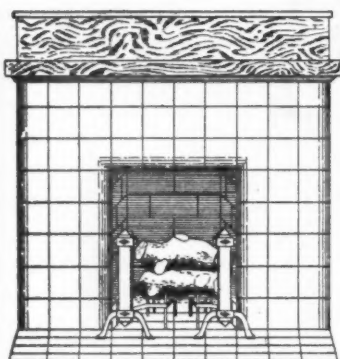
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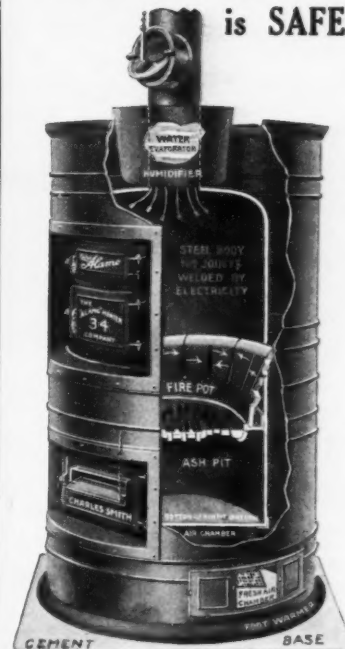
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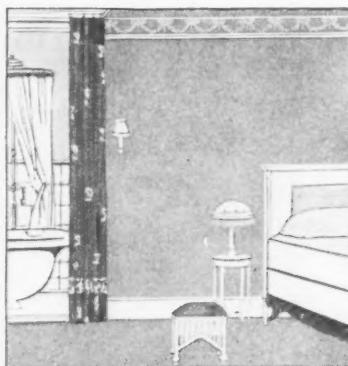
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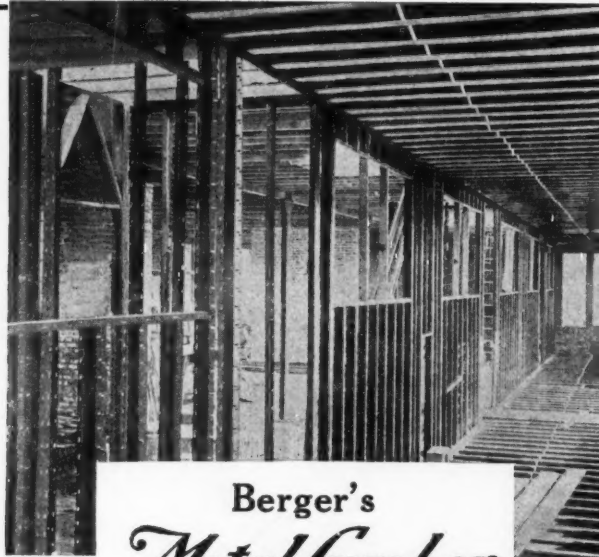
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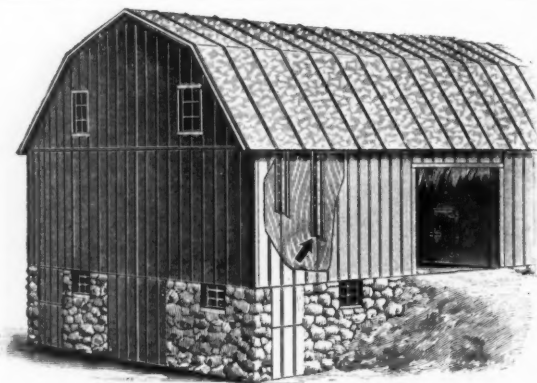
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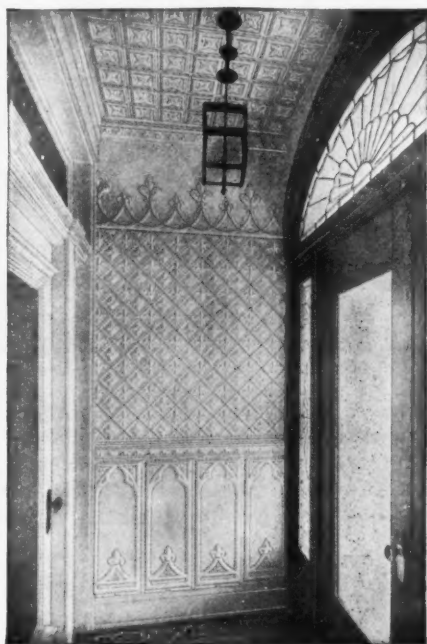
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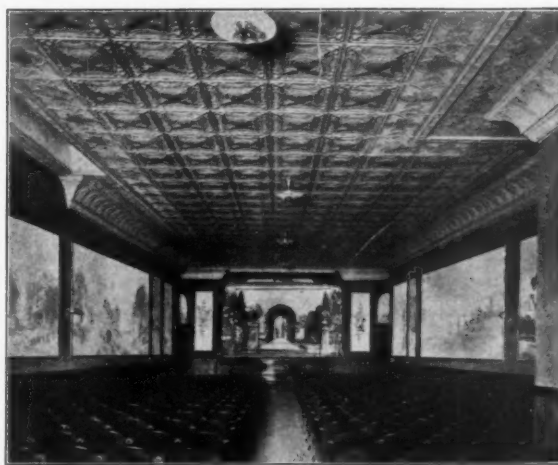
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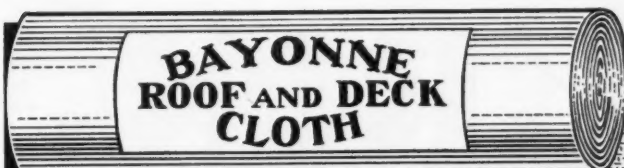
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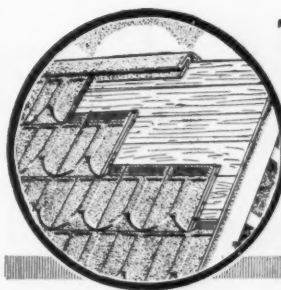
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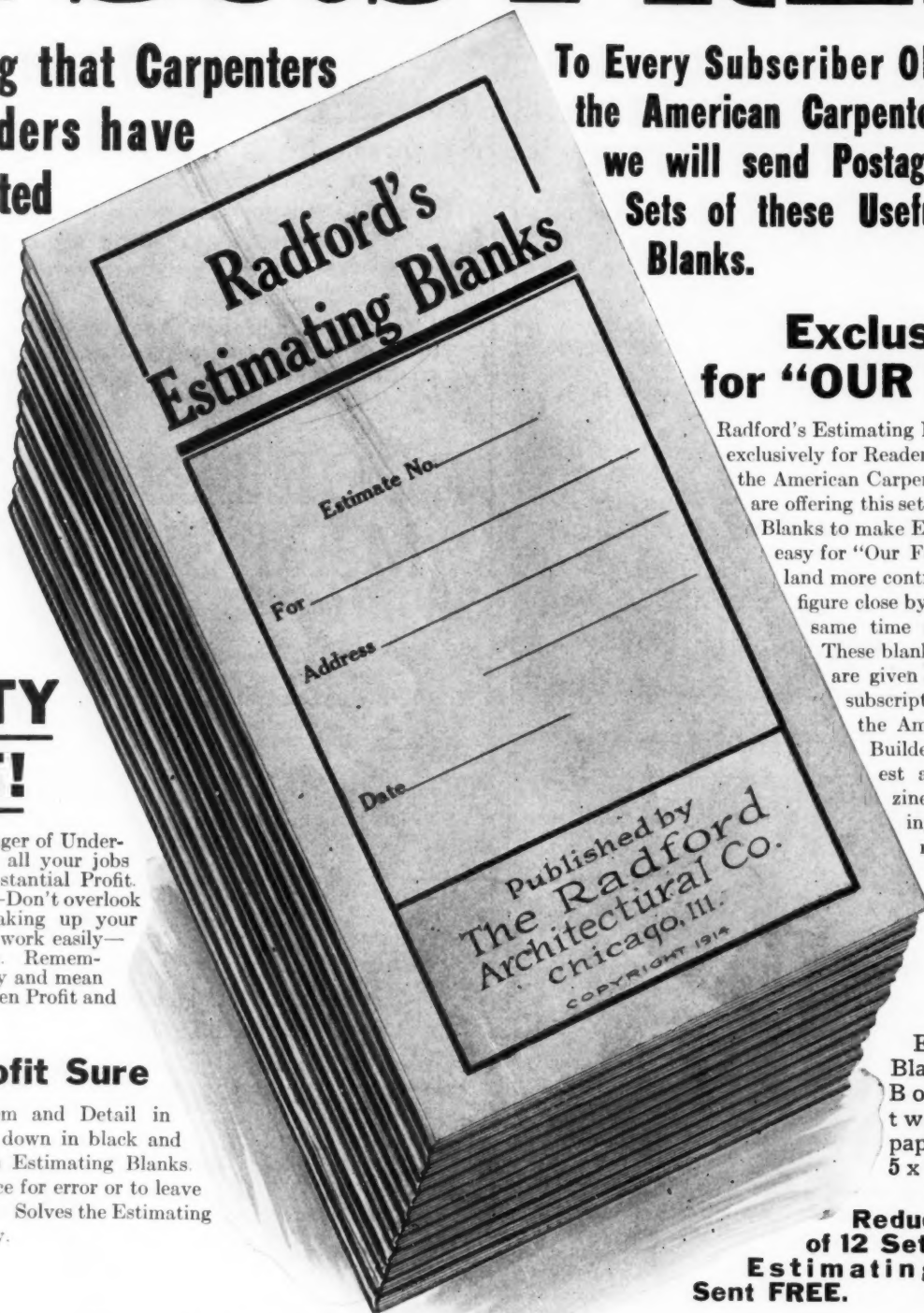
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These Estimating Blanks were compiled and prepared by Mr. Wm. A. Radford, Editor of "Radford's Estimating and Contracting" and head of the Radford Corps of Building Experts. Years of Experience in Estimating has been put into these Blanks and they will be welcomed by Contractors and Builders. They have taken the Uncertainty and Guess Work out of Estimating and put it on a Standard Basis. We are offering these Blanks FREE to everyone who renews his subscription and to new subscribers. Glance over a few Items listed and you will see what a valuable aid these Blanks will be to all Builders and why you should have them.

A Few Items Covered in Radford's Estimating Blanks

Partial Table of Items Covered in Radford's Estimating Blanks

Preliminary Work—

Preparation of Site; Clearing Ground; Laying Out; Teams, Scrapers, etc.

Excavation—

For Foundations; for Acreways; for Cistern; for Out-buildings; for Walks, Driveways, Curbs, etc.; Drilling; Blasting; Shoring; Grading; Drains, etc.

Concrete Work—

Footings and Foundations; Piers; Steps; Floors; Waterproofing; Forms; Reinforcing; Block Work; Wall Ties; Drain Tile; Sidewalks; Driveways; Posts, etc.

Stone Work—

Footings; Foundations; Retaining Walls; Water Table; Sills; Trimmings; Chimneys; Walls; Mortar; Staging; Damp-proofing; etc.

Brickwork—

Common; Face; Arches; Piers; Chimneys; Fireplaces; Firebrick; Mortar; Staging; Pointing, etc.

Terra-Cotta and Tiling—

Tile Floors; Structural Tile Walls; Hearth; Wainscoting; Marble and Mosaic Floors, etc.

Framing—

Walls; Sills; Studding; Joists and Girders; Roof; Porches; Windows; Stairs, etc.

Sheathing and Siding—

Walls; Roof; Porches; Cornice; Building Paper; Shingle Siding, etc.

Roof Covering—

Wood Shingles; Metal Shingles; Asphalt Shingles; Asbestos Shingles; Ready Roll Roofing; Tin; Slate; Tile; Flashing; Skylights, etc.

Exterior Trim—

Water Table; Door and Window Frames; Porch Trim; Cornice Work; Blinds; Lattice Work; Gutters, etc.

Interior Trim—

Doors; Thresholds; Windows; Floors; Panels; Wainscot; Mouldings; Stair Work; Mantels; Window Seats; Buffet; Bookcases; Closets; Cupboards, etc.

Sheet Metal Work—

Cresting; Finials; Skylights; Cornices; Conductors; Flashings; Valleys; Corner Beads; Soldering; Scaffolding, etc.

Steel and Iron Work—

Angles; Brackets; Channels; Columns; Coal Chutes; Fencing; Fire Escapes; Floor Plates; Joist Hangers; Handling and Erecting; Painting, etc.

Plastering—

Furring; Grounds; Wood Lath; Metal Lath; Lime Plaster; Cement Plaster; Coloring; Ornamental Work; Scaffolding, etc.

Painting and Decorating—

Priming; Filling; Exterior and Interior Work; Varnishing; Staining; Enameling; Calcimining; Paperhanging, etc.

Plumbing—

Roughing In; Bath Tubs; Fixtures; Laundry Tubs; Piping and Fittings; Septic Tank; Solder; Lead; Traps; Valves; Testing, etc.

Hardware—

Hinges; Bolts; Locks; Door Knobs; Nails; Sash Hardware; Window Fasteners, etc.

Lighting and Wiring—

Conduits; Cord; Cutout Boxes; Switches; Gas Piping; Acetylene Lighting; Insulators; Sockets, etc.

Heating—

Warm Air; Steam; Hot Water; Pipes and Ducts; Radiators; Registers; Regulators, etc.

Miscellaneous Fixtures and Equipment—

Awnings; Board Walks; Coal Bin; Door and Window Screens; Shutters; Gates; Storm Doors; Vacuum Cleaner; Grading; Sodding, etc.

Outbuildings—

Barns; Sheds; Cyclone Cellar; Feeding Floor; Garage; Hog House; Hen House; Milk House; Stables; Silos; Tanks; Feed Troughs; Windmill, etc.

General Expense—

Board; Bond; Depreciation of Plant; Fences; Insurance; Permits; Protection of Work; Storage of Materials; Telephone; Temporary Light, Heat, etc.; Timekeeping; Water Supply; Watchman, etc.

Summary of Estimate—

Totals of estimated costs under each main head.

Quotations on Materials—

Record of market prices.

Comparison of Estimate and Actual Cost—

Profit on Contract—

Bids of Competitors—

Sub-Bids of Various Trades—

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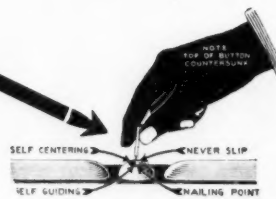
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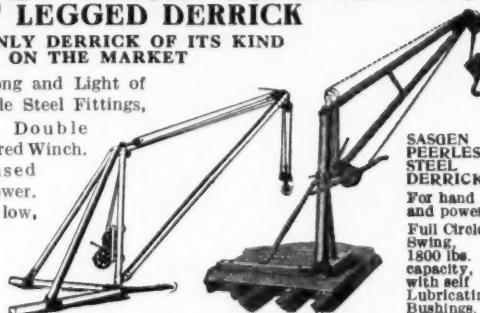
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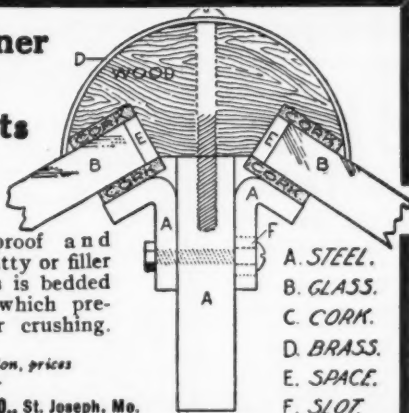
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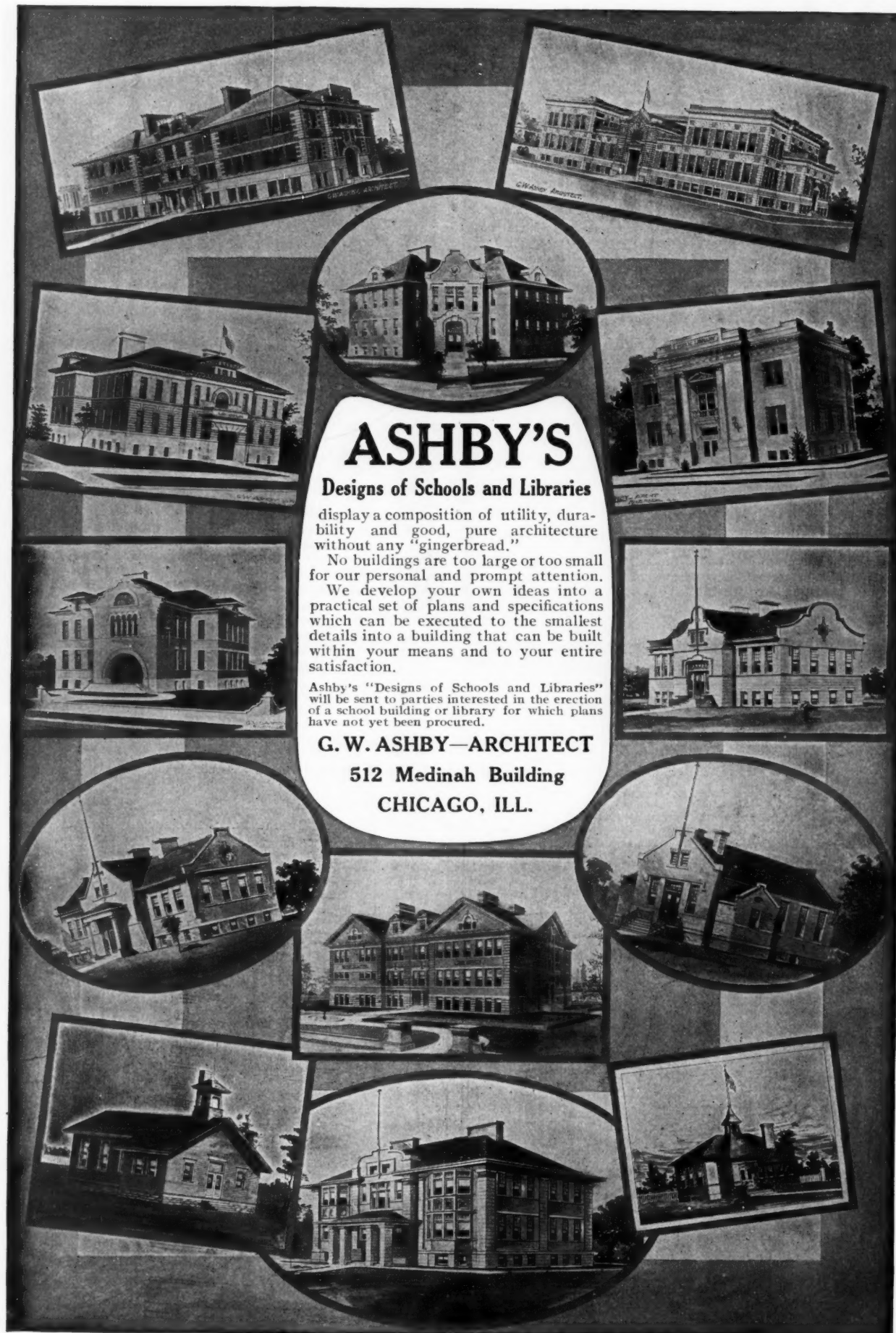
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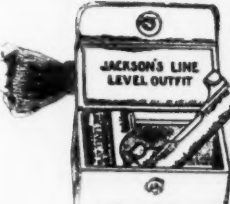
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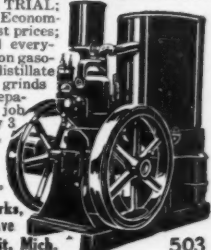
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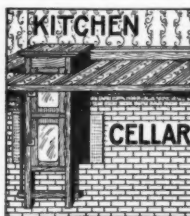
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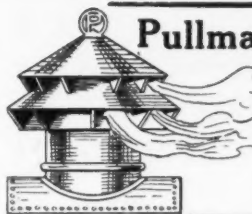
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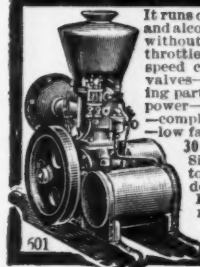
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Sizes 1 1/2 to 18 horse power. Send a postal today for free catalog which tells how Sandow will be useful to you. Nogo-betweeners. Pocket agent's and middlemen's commissions by dealing direct with factory.

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is the ONLY BASE having a CENTER BEARING.

It carries the required weight without allowing the corner supports to sink into the floor and prevents the base of column and floor from rotting.

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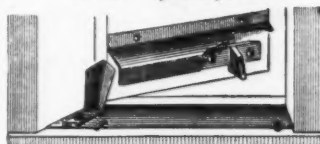
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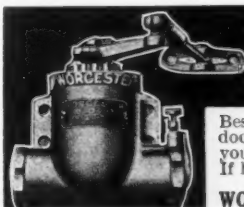


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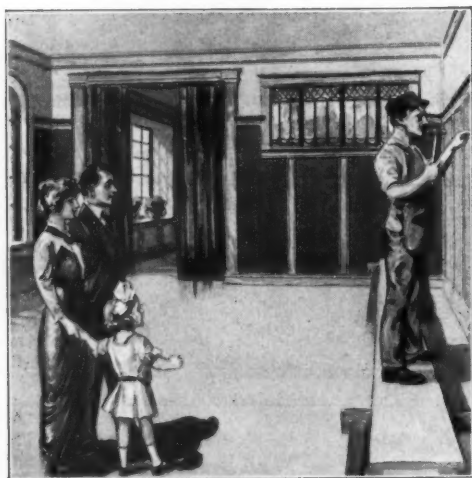
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R. J. KICHLINE, Sales Agent

"Stood the test of our long cold winter of snow and rain—struck by lightning—makes this the coolest cottage around here in the summer—will make it the warmest house in these parts next winter"

The above are extracts from a letter telling about a unique experience with Utility Wall Board 'way up on an island in Lake Huron. A temporary cottage was built only of Utility, laid over a frame of 2x4s—then, after withstanding part of the summer and an entire northern winter, the cottage was completed by laying clapboards over the outside, and lining the inside walls as well as the floors with more Utility.



Utility can be laid satisfactorily—even in the coldest weather by nailing direct to the studing or on top of old plaster.

Of course we do not recommend Utility as **outside** building material. Nor do we claim that Utility will **remain under** water for weeks without injury.

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UTILITY WALL BOARD

Scores of letters in our files give convincing proof that Utility can always be expected to give unusual service under unusual conditions. And that's why Utility Wall Board always satisfies so splendidly under normal conditions.

Huge condensed milk plants find Utility the only satisfactory wall lining for their condensing rooms—where extreme changes of temperature are necessary. Warehouses and other buildings subjected to high wind pressure also find Utility the superior wall lining. Great automobile plants use scores of thousands of square feet of Utility in their varnish dry rooms because Utility alone will withstand the intense heat.

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Learn for yourself what a splendid wall board Utility really is.
Let us send you specimens and interesting wall board data.

THE HEPPE'S COMPANY

4503 Fillmore Street

Mfrs. also of Flex-a-Tile Asphalt Shingles, Asphalt
Paint and Asphalt Roofing in Any Finish

Chicago, Illinois

INDEX TO ADVERTISEMENTS, DECEMBER, 1914

	Page		Page		Page
Alamo Heater Co.	129	Gem City Acetylene Generator Co.	125	Oak Flooring Bureau	138
Aloe Co., A. S.	21	Genuine Bangor Slate Co.	119	Olmstead's Son, L. H.	141
Alpha Portland Cement Co.	127	Goodell Mfg. Co.	32	Ornamental Products Co.	143
American Bell & Foundry Co.	33	Goodell Pratt Co.	24	Oshkosh Mfg. Co.	3
American Cement Machine Co.	11	Gordon VanTine Co.	81	Oxweld Acetylene Co.	125
American Elevator Co.	142	Grand Rapids Hardware Co.	7		
American Floor Surfacing Machine Co.	4			Parker, C. L.	142
American Mantel Tile & Grate Co.	142	Hardin Co., John	141	Parkhill, John	142
American Pulley Co.	27	Hartmann Sanders Co.	128	Parks Ball Bearing Machine Co.	16
American Saw Mill Machinery Co.	18	Haynes Automobile Co.	105	Pearson Mfg. Co.	23
American Sheet & Tin Plate Co.	113	Heald Machine Co.	26	Peerless Blue Print Co.	143
American Steel Scaffold Co.	125	Heiman Addressing & Letter Co.	142	Pennsylvania Saw Co.	1
Andrews Heating Co.	25	Heppes Co.	134-144	Phoenix Sliding Blind Co.	30
Archer Iron Works.	10	Hess Warming & Ventilating Co.	33-129	Plastergon Wallboard Co.	115
Arkansas Soft Pine Mfrs. Assn.	97	Hewitt-Lea-Funk Co.	89	Prentiss Vise Co.	20
Ashby, Geo. W.	140	Holland Furnace Co.	123	Progressive Mfg. Co.	26
Asphalt Ready Roofing Co.	113	Home Lumber & Supply Co.	115	Pullman Automatic Ventilator Co.	143
Atlantic Engine Co.	19	Hornet Mantel Co.	128	Pullman Metal Weather Strip Co.	109
Atlas Engineering Co.	11	Hower, J. K.	143		
Auld & Conger Co.	142	Huber Builders Material Co.	88	Rehm Hardware Co.	29
Automatic Sash Holder Mfg. Co.	141	Hunt, Helm, Ferris & Co.	26-111	Reineke, W. A.	142
Automatic Sealing Vault Co.	122	Hussey & Co., C. G.	23	Reynolds Asphalt Shingle Co., H. M.	134
		Huther Bros. Saw Mfg. Co.	31	Richards Wilcox Mfg. Co.	28
Bangor Slate Mining Co.	119	Hygienic Promotion Co.	109	Roberts Mfg. Co.	115
Barnes Co., W. F. & Jno.	16			Robinson Cabinet Mfg. Co.	139
Barnett & Co., Jos. G. A.	29	Ideal Floor Sander Co.	4	Royal Ventilator Co.	121
Barrell Co., Wm. L.	135	Ideal Tool Works.	95	Rubber Roofing Mfg. Co.	142
Bates & Edmonds Motor Co.	33	Indianapolis Corrugating Co.	123		
Beaver Co., The	115	International Correspondence Schools	117	Samson Cordage Works	141
Beckmann Co., The L.	21	International Roofing Mfg. Co.	116	Sand & Sons, J.	27
Berger Mfg. Co.	32-132-138	Iona Ventilator Co.	142	Sargent & Co.	34
Bishop & Co., Geo. H.	23	Irwin Auger Bit Co.	94	Sasgen Derrick Co.	138
Blue Valley Slate Mfg. Co., Ltd.	143	Ives Co., The H. B.	119	Schlueter, M. L.	4
Blystone Mfg. Co.	10			Schrauger & Johnson	30
Bommer Bros.	36	James Mfg. Co.	91	Security Manufacturing Co.	124
Bostwick Steel Lath Co.	139	Jennings & Co., C. E.	28	Sedgwick Machine Works	8
Boyce Furnace Co.	129	Johns Manville Co., H. W.	113	Shapleigh Hardware Co.	121
Boyle Co., John	135	Johnson & Sons, S. C.	117	Sheldon Slate Co., F. C.	115
Bradt Publishing Co.	138	Johnson, E. J.	26	Sherman Mfg. Co., H. B.	22
Brilliant Gas Lamp Co.	142	Johnston, J. D.	142	Shultz All Steel Corner Post Co.	139
Brown, Chas.	142			Sidney Elevator Mfg. Co.	8
Buck Bros.	27	Karol, B. B.	33	Sidney Tool Co.	17
Buffalo Wire Works Co.	32	Kees Mfg. Co., F. D.	141	Simmons Hardware Co.	121
Building Material Exhibit	9	Keighley Metal Ceiling Co., S.	128	Simonds Mfg. Co.	86
		King, Wm. F.	8	Sioux City Engine & Machinery Co.	12
Cabot, Samuel	36	Kissel Motor Car Co.	104	Slatington Slate Co.	122
Caldwell Mfg. Co.	24	Klauer Mfg. Co.	133	Smith, Harry A.	143
Canton Foundry & Machine Co.	123	Knickerbocker Co., The	10	Smith & Hemenway Co.	24
Carborundum Co.	19	Kolesch & Co.	20	Sober, C. K.	125
Cement Tile Machinery Co.	12			Southern Cypress Mfrs. Assn.	143
Ceresit Waterproofing Co.	111	LaPlante-Choate Mfg. Co.	24	Southington Hardware Co.	109
C. H. & E. Mfg. Co.	18	Lichty & Sons Co., B. F.	30	Speidel, J. G.	8
Champion Safety Lock Co.	6	Lorenzen & Co., Chas. F.	118	Standard Machine Tool & Supply Co.	119
Chappell Co., Wavell	5	Louden Machinery Co.	111	Standard Paint Co.	5
Chelsea Elevator Co.	8	Lowe Bros. Co.	131	Standard Scale & Supply Co.	13
Cheney & Son, S.	143	Lufkin Rule Co.	20	Standard Screen Co.	29
Chicago Grille Works	128			Standard Stained Shingle Co.	134
Chicago Machinery Exchange	16	Maacks Academy of Architecture	142	Stanley Rule & Level Co.	29
Chicago Millwork Supply Co.	139	MacAndrews & Forbes Co.	83	Stanley Works, The	121
Chicago Spring Butt Co.	36	McCreery Mfg. Co.	90	Star Expansion Bolt Co.	22
Chicago Technical College	131	Mack & Co.	20	Starrett & Co., L. S.	34
Chief Draftsman	147	Mack Iron & Wire Works Co.	32	Stern Mfg. Co.	7
Church & Co., E. I.	143	Maple Flooring Mfrs. Assn.	85	Stine Screw Holes Co.	22
Cincinnati Mfg. Co.	24	Mastic Wall Board Rfg. Mfg. Co.	146	Storm Mfg. Co.	142
Cincinnati Tool Co.	4	Maximilian Co., The	123	Swan Co., Jas.	28
Coleman, Watson E.	142	Metallic Batten Co.	36	Sykes Metal Lath & Roofing Co.	32
Columbia Iron & Wire Works	23	Metallic Sign Letter Co.	142	Syracuse Twist Drill Co.	25
Cornell Wood Products Co.	92	Michigan Engine Valve Co.	108		
Cortright Metal Roofing Co.	135	Midland Terra Cotta Co.	96	Taylor Mfg. Co., Jas. L.	5
Crescent Machine Co.	14-15	Milburn Co., Alexander	142	Toledo Indicating Level Co.	87
		Miles Mfg. Co.	12	Triple A. Machine Co.	6
Dahl Mfg. Co.	25	Miller-Laut Co., The	143	Trussed Concrete Steel Co.	106
Davis Acetylene Co.	125	Miller Mfg. Co., A. W.	19		
Davis Mfg. Co.	107	Millers Falls Co.	31	United Electric Co.	117
Detroit Engine Works	141	Milwaukee Corrugating Co.	132		
Detroit Motor Car Supply Co.	143	Miotke, Jos.	7	VanDoren Mfg. Co.	27
Detroit Show Case Co.	6	Moeschl-Edwards Corrugating Co.	132	Vaughan & Bushnell Mfg. Co.	2
Diamond Metal Stamping Co.	110	Montrose Metal Shingle Co.	113		
Didrickson, H. P.	5	Moorman & Otten Co.	128	Wagner Mfg. Co.	119
Disston & Sons Co., Henry	22	Morrill, Chas.	36	Wallace, J. D.	18
Dixon Crucible Co., Jos.	19	Mullins Co., The W. H.	131	Warner Elevator Mfg. Co.	8
Dow Wire & Iron Works	32	Myers & Bros., F. E.	23	Warren Knight Co.	21
Dunn & Co., W. E.	11			Warren Profile Co.	29
		National Lead Co.	143	Waterloo Register Co.	123
East Bangor Consolidated Slate Co.	19	National Mfg. Co.	148	Weber Mfg. Co.	7
Edwards Mfg. Co.	133	National Plaster Board Co.	112	Wells Lumber Co., J. W.	138
Elite Mfg. Co.	31	National Sheet Metal Roofing Co.	113	White Co., David	21
Ellis Engine Co.	127	New Way Motor Co.	127	White Co., L. & I. J.	20
Erlinder, P. E.	31	Niagara Metal Weather Strip Co.	109	Williamson Heater Co.	125
Eureka Machine Co.	127	Nicholls Mfg. Co.	4	Willis Mfg. Co.	30
		Nickerson Mfg. Co.	128	Witte Iron Works Co.	126
Fay & Egan Co., J. A.	16	North Bros. Mfg. Co.	7	Wolff Mfg. Co., L.	33
Flintkote Mfg. Co.	114	Northern Hemlock & Hardwood Mfrs. Assn.	93	Woods, Alfred W.	130
Foos Gas Engine Co.	127	Northrop, Coburn & Dodge Co.	133	Woodwell Co., Jos.	141
Fox Machine Co.	25	Northwestern Compo-Board Co.	118	Worcester Mfg. Co.	143
Fox Supply Co.	5	Northwestern Expanded Metal Co.	120	Wyoming Asbestos Producing Co.	98-103 Inc.
Fresh Air Ventilator Co.	30	Northwestern Steel & Iron Co.	12		
Gage Tool Co.	14-143	Norwalk Vault Co.	88	York Automatic Dumb Waiter Co.	8
Galesburg Sheet Metal Works	30	Novo Engine Co.	122		
Geier & Bluhm	21				

NOTICE TO ADVERTISERS

Forms for the January number of the American Carpenter and Builder will close promptly on December 20. New Copy changes and orders for omissions of advertisements must reach our business office, 1827 Prairie Ave., Chicago, not later than the above date. If new copy is not received by the 20th of the month preceding date of publication the publishers reserve the right to repeat last advertisement on all unexpired contracts.

AMERICAN CARPENTER & BUILDER CO.

The Creosoted Lath

Built with
Bishopric
Stucco
Board



Jno. C. Cameron
Contractor
and Builder
Arlington, Mass.

The wood lath in Bishopric Stucco or Plaster Board are thoroughly creosoted. Why?

Because creosoting preserves them, prevents swelling, shrinking, warping, and they withstand exposure to all kinds of weather.

The Union Pacific, the Northwestern, and other railways creosote their ties and telegraph poles for the same reason.

The creosoting of wood is nothing new. It has been done for many years—more than long enough to prove that it does what it's intended to do. And so it is with every other part of this product—the dovetailed lath, the Asphalt Mastic lining, the fibre board backing—all ages-old in principle and acknowledged to be unsurpassed for the various purposes intended.

It's the combination of these principles and materials into the Bishopric Stucco Board that accounts for the de-



"Built on the Wisdom of Ages"

pendability, efficiency and uniform satisfaction, under all conditions, of that product.

The dovetailed lath hold the stucco so it can't let loose, crack or crumble—the Asphalt Mastic is moisture proof and fire resisting, dampness can't penetrate it—the sized fibre board protects against heat and cold and is an effective sound-deadener. And all these in combination meet the most exacting requirements of a successful background for stucco, cement or plaster.

There is no metal in Bishopric Board to rust and break away from its fastenings

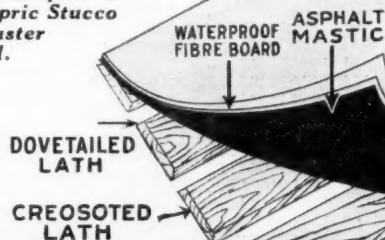
Bishopric Stucco or Plaster Board costs less than other backgrounds and saves in both material and labor. From any and every viewpoint it's an economical proposition.

Our free book "Durable Homes by the Bishopric System" illustrates homes, apartments, factory and public buildings on which Bishopric Board has been used. It contains letters from builders, architects and users, and furnishes facts and fig-

ures to prove that Bishopric Board cuts the cost at least 25%.

Don't take our word for this—investigate for yourself—be convinced!

Send today for Book and Free Samples of Bishopric Stucco or Plaster Board.



The Mastic Wall Board & Roofing Co.

611 Este Ave., Cincinnati, Ohio

Central Door & Lumber Co., Portland, Oreg.

Licensed Manufacturers and Distributors for Pacific Slope

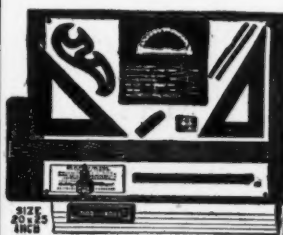
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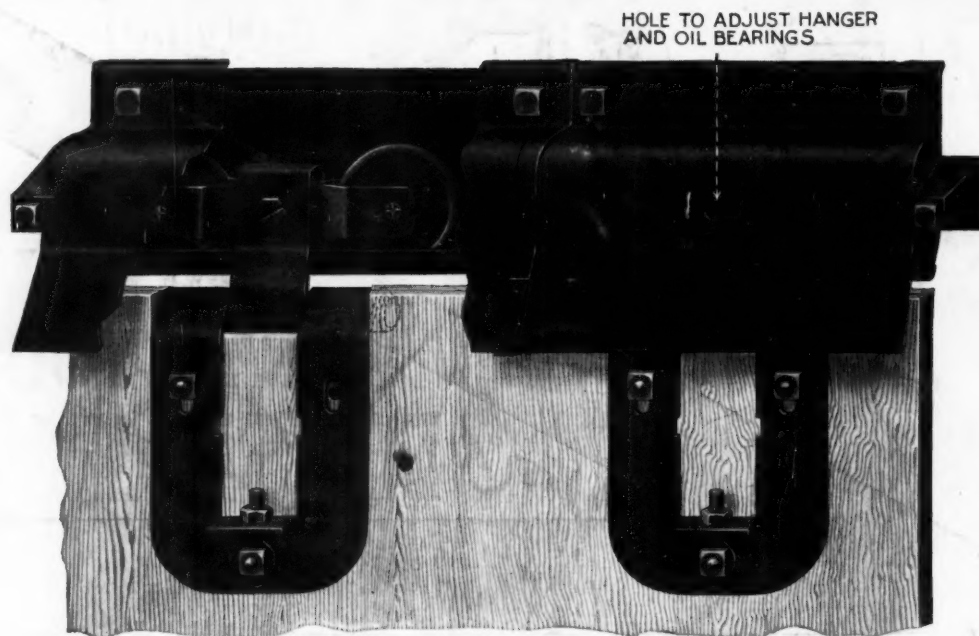
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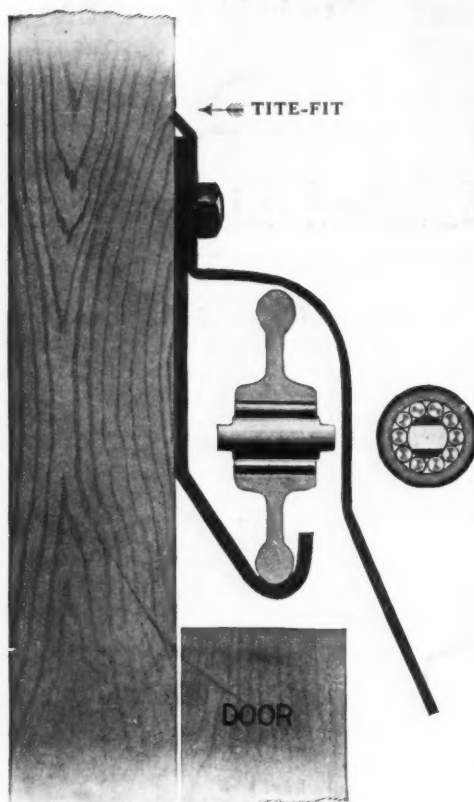
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The above sectional view clearly illustrates the Storm-Proof feature of this Rail; the perfect tread for the wheels and the roller bearings with which each wheel is equipped.

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The adjustable hanger illustrated is the youngest of the Storm-Proof family, and one of the most robust. It has every feature needed in a barn door hanger. It is earning for itself a well-deserved popularity with carpenters and contractors. The Storm-Proof Rail on which it runs is easy to attach, bird, dust and storm-proof. Saves labor and material. (*Note sectional view.*)

For your own peace of mind it will pay you to try them. Send for illustrated booklet, "Sliding Barn Door Equipment" and give dealer's name.

NATIONAL MFG. CO.
Sterling, Illinois.